

# Champion®

## *Installation and Service Guide with Service Replacement Parts*

*Beginning with Serial No. R3448 and above*



Single Tank  
Model 44



Single Tank w/Prewash  
Model 66 PW



Two Tank w/Prewash  
Model 64

### **E-series Rack Conveyor Dishwasher Models**

Basic Single Tank	Single Tank w/Prewash
44	66 PW 70 FFPW 80 HDPW
44 LT	66 LTPW 70 LTFFPW 80 LTHDPW
44 DR	66 DRPW 70 DRFFPW 80 DRHDPW 44 DRWS 66 DRWSPW 70 DRWSFFPW 80 DRWSHDPW
44WS	66WSPW 70 WSFFPW 80 WSHDPW
54 DR	76 DRPW 80 DRFFPW 90 DRHDPW
Basic Two Tank	Two Tank w/ Prewash
64	86 PW 90 FFPW 100 HDPW
84	106 PW 110 FFPW 120 HDPW

Dishwasher serial no.



[www.championindustries.com](http://www.championindustries.com)

Issue Date: 6.12.07

**Manual P/N 114315 rev.-**

*For machines beginning with S/N R3448 and above*

P.O. Box 4149  
Winston-Salem, NC 27115  
336/661-1556 Fax: 336/661-1660  
Toll-free: 800.858.4477

2674 N. Service Road, Jordan Station  
Ontario, Canada L0R 1S0  
905/562-4195 Fax: 905/562-4618  
Toll-free: 800.263.5798



For future reference, record your dishwasher information in the box below.

Model Number\_\_\_\_\_ Serial Number\_\_\_\_\_

Voltage\_\_\_\_\_Hertz\_\_\_\_\_ Phase\_\_\_\_\_

Champion Service Agent \_\_\_\_\_ Tel: \_\_\_\_\_

Champion Parts Distributor \_\_\_\_\_ Tel: \_\_\_\_\_



For all models:

The data plate mounts to  
one side of the top-mounted  
control cabinet.

#### National Service Department



**In Canada:**

Toll-free: 800/ 263-5798

Tel: 905/ 562-4195

Fax: 905/ 562-4618

email: [service@moyerdiebellimited.com](mailto:service@moyerdiebellimited.com)



**In the USA:**

Toll-free: 800/ 858-4477

Tel: 336/ 661-1556

Fax: 336/ 661-1660

email: [service@championindustries.com](mailto:service@championindustries.com)

**ATTENTION:**

The dishwasher model number,  
serial number, voltage, hertz and phase  
are needed to identify your machine and to  
answer questions.

Please have this information on-hand  
if you call for service assistance.

*We support*

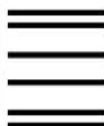
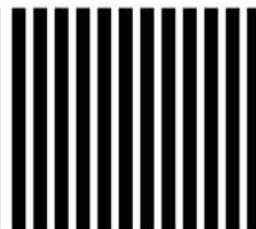


# ATTENTION:

Complete the back of the  
POSTAGE PAID WARRANTY CARD  
below, then cut along the dashed lines  
and mail immediately to make sure your  
dishwasher warranty is activated.



NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES



**BUSINESS REPLY MAIL**

FIRST-CLASS MAIL PERMIT NO. 2101 WINSTON-SALEM, NC

POSTAGE WILL BE PAID BY ADDRESSEE

Champion Industries, Inc.

P.O.Box 4149

Winston-Salem, NC 27115-4149



# WARRANTY REGISTRATION CARD

MODEL

SERIAL #

Date of Installation: \_\_\_\_\_

Owner's Location: Company \_\_\_\_\_

Address \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_

Contact Name \_\_\_\_\_

Purchased from: Dealer \_\_\_\_\_

Telephone \_\_\_\_\_

Contact Name \_\_\_\_\_

Note: In USA this card must be returned to validate warranty.

IMPORTANT IMPORTANT



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## ***Revisions to this manual***

- This is where we record changes to the manual. A revision might be a part number change, new instructions, or information that was not available at print time.
- We reserve the right to make changes to this manual without notice and without incurring any liability by making the changes..
- Dishwasher owners may request a revised manual, at no charge, by calling (800.858.4477) in the USA or (800.263.5798) in Canada.

<b><i>Revision Date</i></b>	<b><i>Revised Pages</i></b>	<b><i>Serial Number Effectivity</i></b>	<b><i>Revision Description</i></b>
9.1.04	All	R3448	Released first edition 7.0608.1

Dear Owner:

Thank-you for choosing our dishwasher.

We appreciate your business.

This manual covers the E-series Rack Conveyor Dishwashers:

Electric high temperature single tank and multiple tank rack conveyor dishwashers with built-in electric boosters in 40°F/22°C rise or optional 70°F/39°C rise.

Steam high temperature single tank and multiple tank rack conveyor dishwasher with built-in steam booster in 40°F/22°C rise or an optional 70°F/39°C rise booster.

Electric low temperature chemical sanitizing single tank and multiple tank rack conveyor dishwasher

*The installation, and initial start-up of your dishwasher must be performed by qualified electricians, plumbers, and authorized service technicians trained in commercial dishwashers.*

*Champion provides authorized factory trained service agents to supervise the assembly and initial start-up of your dishwasher.*

*Defects and repairs caused by unauthorized installers will not be covered by the dishwasher warranty.*

## ***E series Rack Conveyor Dishwashers***

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## LIMITED WARRANTY

Champion Industries Inc. (herein referred to as Champion), P.O. Box 4149, Winston-Salem, North Carolina 27115, and P.O. Box 301, 2674 N. Service Road, Jordan Station, Canada, L0R 1S0, warrants machines, and parts, as set out below.

**Warranty of Machines:** Champion warrants all new machines of its manufacture bearing the name "Champion" and installed within the United States and Canada to be free from defects in material and workmanship for a period of one (1) year after the date of installation or fifteen (15) months after the date of shipment by Champion, whichever occurs first. [See below for special provisions relating to glasswashers.] The warranty registration card must be returned to Champion within ten (10) days after installation. If warranty card is not returned to Champion within such period, the warranty will expire after one year from the date of shipment.

Champion will not assume any responsibility for extra costs for installation in any area where there are jurisdictional problems with local trades or unions.

If a defect in workmanship or material is found to exist within the warranty period, Champion, at its election, will either repair or replace the defective machine or accept return of the machine for full credit; provided; however, as to glasswashers, Champion's obligation with respect to labor associated with any repairs shall end (a) 120 days after shipment, or (b) 90 days after installation, whichever occurs first. In the event that Champion elects to repair, the labor and work to be performed in connection with the warranty shall be done during regular working hours by a Champion authorized service technician. Defective parts become the property of Champion. Use of replacement parts not authorized by Champion will relieve Champion of all further liability in connection with its warranty. In no event will Champion's warranty obligation exceed Champion's charge for the machine. The following are not covered by Champion's warranty:

- a. Lighting of gas pilots or burners.
- b. Cleaning of gas lines.
- c. Replacement of fuses or resetting of overload breakers.
- d. Adjustment of thermostats.
- e. Adjustment of clutches.
- f. Opening or closing of utility supply valves or switching of electrical supply current.
- g. Cleaning of valves, strainers, screens, nozzles, or spray pipes.
- h. Performance of regular maintenance and cleaning as outlined in operator's guide.
- i. Damages resulting from water conditions, accidents, alterations, improper use, abuse, tampering, improper installation, or failure to follow maintenance and operation procedures.
- j. Wear on Pulper cutter blocks, pulse vanes, and auger brush.

*Examples of the defects not covered by warranty include, but are not limited to:* (1) Damage to the exterior or interior finish as a result of the above, (2) Use with utility service other than that designated on the rating plate, (3) Improper connection to utility service, (4) Inadequate or excessive water pressure, (5) Corrosion from chemicals dispensed in excess of recommended concentrations, (6) Failure of electrical components due to connection of chemical dispensing equipment installed by others, (7) Leaks or damage resulting from such leaks caused by the installer, including those at machine table connections or by connection of chemical dispensing equipment installed by others, (8) Failure to comply with local building codes, (9) Damage caused by labor dispute.

**Warranty of Parts:** Champion warrants all new machine parts produced or authorized by Champion to be free from defects in material and workmanship for a period of 90 days from date of invoice. If any defect in material and workmanship is found to exist within the warranty period Champion will replace the defective part without charge.

**DISCLAIMER OF WARRANTIES AND LIMITATIONS OF LIABILITY.** CHAMPION'S WARRANTY IS ONLY TO THE EXTENT REFLECTED ABOVE. CHAMPION MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED, TO ANY WARRANTY OF MERCHANTABILITY, OR FITNESS OF PURPOSE. CHAMPION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. THE REMEDIES SET OUT ABOVE ARE THE EXCLUSIVE REMEDIES FOR ANY DEFECTS FOUND TO EXIST IN CHAMPION DISHWASHING MACHINES AND CHAMPION PARTS, AND ALL OTHER REMEDIES ARE EXCLUDED, INCLUDING ANY LIABILITY FOR INCIDENTALS OR CONSEQUENTIAL DAMAGES.

Champion does not authorize any other person, including persons who deal in Champion dishwashing machines to change this warranty or create any other obligation in connection with Champion Dishwashing Machines.

## Model Descriptions

Champion single tank and two tank rack conveyor dishwashers are fully automatic. Standard equipment includes 1HP prewash, 2HP wash and 2HP power rinse pumps. The conveyor drive is a 1/6 HP motor. All models are available in right-to-left (R-L) or left-to-right (L-R) direction.

### Model Numbers

Single Tank - Basic .....	44, 54, 44 WS, 44 LT
Single Tank with 22" Prewash.....	66 PW, 76 PW, 66 WS, 66 LT PW
Single Tank with 36" Prewash.....	80 HDPW, 90 HDPW, 80WS HDPW
Single Tank with 26" Front Feed Prewash .....	70 FFPW, 80 FFPW, 70 WS FFPW

- The 44 DR and 54 DR basic models are high temperature 180°F/80°C hot final rinse water sanitizing dishwashers. Prewash options are available in 22", 36", and 26" front feed. Built-in stainless steel electric booster heaters in 40°F/22°C and 70°F/39°C rise are available and steam booster heaters in 40°F/22°C and 70°F/39°C rise. Dual-Rinse (DR) models feature a recirculating rinse that conserves energy.
- The 44 WS and 44 DRWS models are WaterSaver high temperature 180°F/80°C hot final rinse water sanitizing dishwashers. Prewash options are available in 22", 36", and 26" front feed. Built-in stainless steel electric booster heaters in 40°F/22°C and 70°F/39°C rise are available and steam booster heaters in 40°F/22°C and 70°F/39°C rise. Dual-Rinse (DR) models feature a recirculating rinse that conserves energy.
- The 44 LT and 66 LT models are low temperature 140°F/60°C sodium hypochlorite (chlorine bleach) sanitizing final rinse to maintain a minimum concentration of 50 PPM on the wares. The concentration of sanitizer must be tested at regular intervals using chlorine test papers.

Two Tank - Basic .....	64, 72, 84
Two Tank with 22" Prewash .....	86 PW, 94 PW, 106 PW
Two Tank with 36" Prewash .....	100 HDPW, 108 HDPW, 120 HDPW
Two Tank with 26" Front Feed Prewash.....	90 FFPW, 98 FFPW, 110 FFPW

- The 64, and 84 basic models are high temperature 180°F/80°C hot water final rinse sanitizing models. Prewash options are available in 22", 36", and 26" front feed. Built-in stainless steel electric booster heaters in 40°F/22°C and 70°F/39°C rise are available and steam booster heaters in 40°F/22°C and 70°F/39°C rise.
- All rack conveyor dishwasher models are covered by a 1-year parts and labor limited warranty.

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## Installation

### Unpack and Place

#### **!!ATTENTION!!**

**Use caution** when moving or lifting the dishwasher to prevent damaging the dishwasher or the installation site.

Check doorway and passageway clearance before moving the dishwasher.

Remove dishwasher front panels and check under the machine base for obstructions before moving.

1. Inspect the dishwasher for shipping damage and immediately report any damage to the freight carrier. Save all packing materials.
2. Check the dishwasher interior for curtains, panels and other supplies.
3. Lift the dishwasher off the shipping pallet and move the machine to its permanent location.
4. Leave a minimum of 6" between walls and the rear of the dishwasher.
5. Level the dishwasher side-to-side and front-to-back using a bubble level.  
The dishwasher legs are adjusted by screwing them in or out.
6. Do not remove tags attached to the utility connections.
7. Remove the protective film from the dishwasher exterior.  
Remove any foreign material from the dishwasher interior.

### Plumbing - Hot water supply

#### **NOTE:**

Only qualified personnel should make dishwasher plumbing connections. Connections must meet local plumbing and sanitary codes.

Improper installation is not covered by the dishwasher limited warranty.

1. Connect a 3/4" NPT hot water supply line to the line strainer located at the top rear of the dishwasher.

For a dishwasher without a booster heater, the hot water connection must supply a minimum of 180°F/80°C (measured at the dishwasher).

For a 40°F/22°C rise booster heater, the hot water connection must supply a minimum of 140°F/60°C (measured at the dishwasher).

For a 70°F/39°C rise booster heater, the hot water connection must supply a minimum of 110°F/45°C (measured at the dishwasher).

For a low temperature chemical sanitizing machine, the hot water connection must supply a minimum of 140°F/60°C (measured at the dishwasher).

2. Install a pressure reducing valve (PRV) before the dishwasher supply connection if the flowing line pressure is greater than 25psi [173kPa] at the machine. Set the PRV flowing pressure to 20-22psi [138-151 kPa]. PRV's are supplied by Champion or others.

## Installation

### Plumbing Connections - Hot water supply *continued*

3. Install service shut-off valves in the supply line as close to the dishwasher as possible. Valves must be the same size or larger than the supply line.

### Cold water supply

1. Connect a 1/2" NPT cold water supply line for dishwashers equipped with a prewash cold water tempering option. Connection is located at the top rear of the dishwasher load end.
2. Connect a 1/2" NPT cold water supply line for dishwashers equipped with a drain cold water tempering option. Connection location can vary depending on site requirements.

### Drain Connections

1. The drain trunk line was removed and packed inside the dishwasher prior to shipping. Install the drain trunk line. Dual-Rinse (DR) models also have PVC drain lines that were packed inside the dishwasher. Install the PVC piping on the unload end of the dishwasher.
2. Connect a 1-1/2" NPT or larger gravity drain line to the dishwasher. Observe local plumbing and sanitary codes.

### Steam Supply and Condensate Connections

1. Connect a steam supply line the same size or larger to the dishwasher at the steam supply strainer located at the steam booster heater.
2. Connect a gravity condensate return line to the dishwasher. A condensate drain water lift pump (supplied by others) must be installed if the condensate return line rises above the finished floor (AFF).

### Ventilation

#### **DO NOT VENT THE DISHWASHER INTO WALLS, CEILINGS, OR CONCEALED SPACES.**

1. Connect stainless steel water-tight duct INSIDE the 4" x 16" [102mm x 407mm] vent stacks at the load and unload ends of the dishwasher.
2. A minimum of 6 air changes per hour of kitchen air is recommended.
3. Follow the ventilation requirements below.

Dishwasher with prewash tank

Load end -150 CFM @ 1/4" (SP), [71 Liters/Sec]

Unload end - 400 CFM @ 1/4" (SP), [189 Liters/Sec]

Dishwasher without prewash tank

Load end -200 CFM @ 1/4" (SP), [95 Liters/Sec]

Unload end - 400 CFM @ 1/4" (SP), [189 Liters/Sec]

4. Dishwasher vents are equipped with adjustable dampers.



## Installation

### Electrical Connections

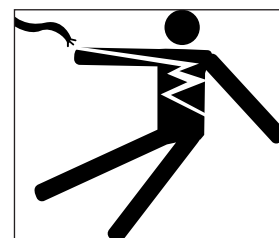
#### **WARNING !**

ELECTRIC SHOCK may cause INJURY OR DEATH.

THIS DISHWASHER MAY HAVE MULTIPLE POWER SERVICE CONNECTIONS.

DO NOT WORK ON ANY ENERGIZED CIRCUIT.

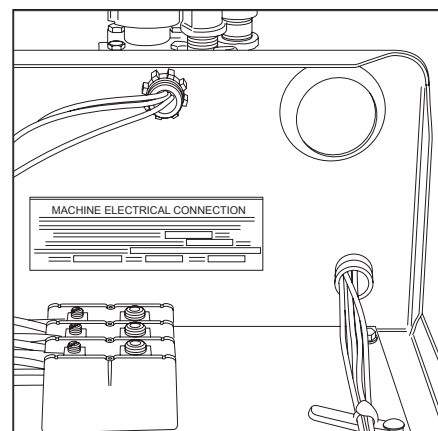
Turn off all main power service disconnect switches.  
Attach a label to the breaker indicating that work is being done on the electric circuits.



#### **!!ATTENTION!!**

Electrical and grounding connections must comply with the National Electrical Code and Local Electrical Codes.

A qualified electrician **MUST** compare the electrical power supply with the machine electrical specifications stamped on the MACHINE ELECTRICAL CONNECTION PLATE located inside the control cabinet before connecting the main power to the dishwasher.



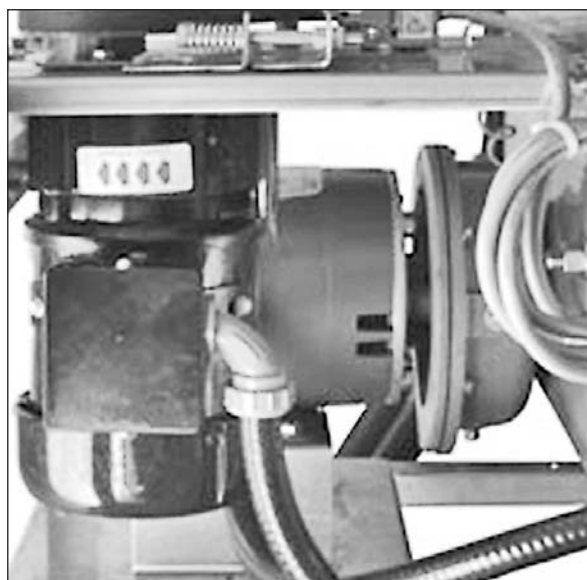
1. The Main incoming power to the dishwasher is made at the top of machine in the control cabinet.
2. The electrician must connect the incoming power based on the information that is stamped on the Machine Electrical Connection Plate.
3. Any change to the Machine Electrical Connection Plate must be approved by the factory in advance.
4. The dishwasher main power terminal block is located inside the top-mounted control cabinet.
5. A knock-out plug is provided at the rear of the control cabinet for electrical service connections.
6. Built-in electric booster heaters have a separate main power connection except Models 44 WS and 66WS.
7. Electric blower-dryers have a separate main power connection.

## **Electrical Connections** *continued*

8. Motor rotation was set at the factory.
9. The conveyor drive motor rotation is indicated by a red arrow located on the side of the motor.
10. The single phase drive motor (208-240V only) rotation must be changed at the drive motor junction box.
11. Three phase drive motor (480-575V) rotation must be reversed in the control cabinet.
12. Reverse the L1 and L2 wires on the output side of the dishwasher Main Terminal Block (MTB) located inside the top-mounted control cabinet.

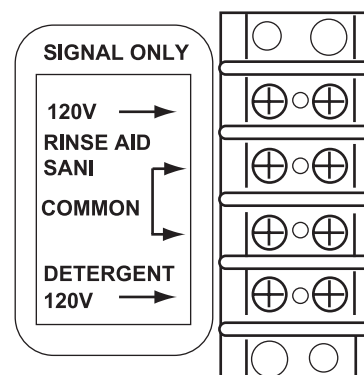
The photograph to the right shows the conveyor drive motor with its direction arrow.

A wash pump/motor assembly can be seen in the background.



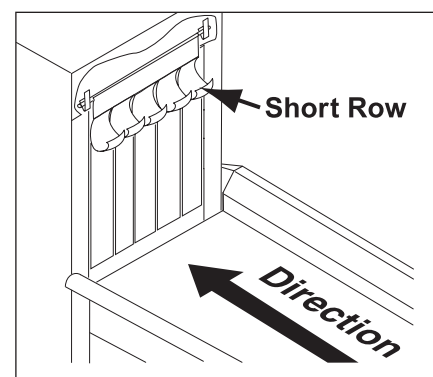
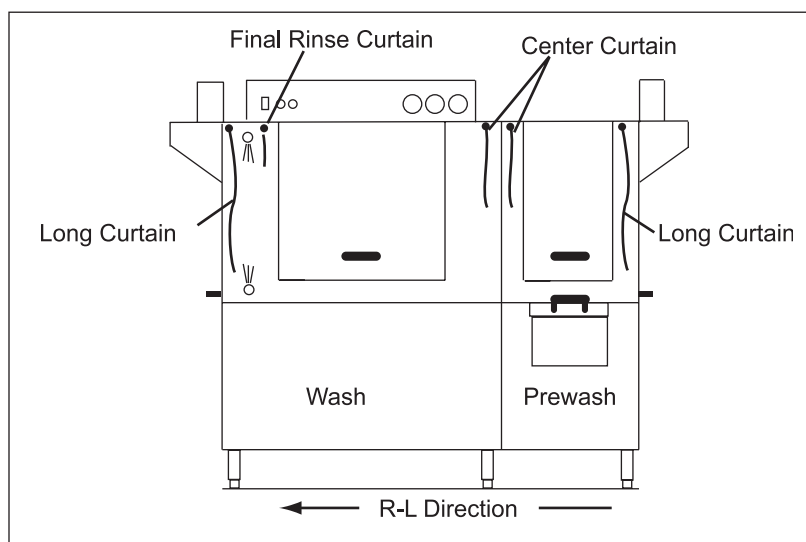
## Chemical Connections

1. Use a qualified detergent/chemical supplier for detergent/chemical and dispensing equipment needs.
2. Labeled detergent control circuit connection terminals are provided in the control cabinet for detergent and rinse agent/sanitizer dispensing equipment (supplied by others).
3. The illustration on the right, shows the terminal board for the current production machines .  
The signal connection points include:
  - Detergent signal 120VAC, 1Amp max amp load
  - Rinse aid/Sanitizer signal 120VAC, 1Amp max amp load
4. A removable black plug is provided in the load end side of the wash tank (behind the drive motor) for installation of the detergent conductivity cell.



## Curtain Locations

1. Refer to the illustrations below and hang the curtains as shown.  
J-hooks are located in the corners of each section to accept the curtain rods.
  - Standard long curtains 24" x 20-1/4"
  - High hood long curtains 24" x 22-3/4"
  - Standard short curtains 24" x 13-1/4"
  - High hood short curtains 24" x 20-1/4"
  - Final rinse curtain 24" x 6-1/4"
2. Make sure the that the short flaps of the curtains face the load end of the dishwasher. The longest curtains always go on each end of the dishwasher.



## Attach the dishtables

1. Attach dishtables (supplied by others) to the load and unload ends of the dishwasher.
2. The table must fit over the dishwasher end flange and extend down into the dishwasher.
3. The dishtables must angle toward the dishwasher so water on the tables will drain into the dishwasher. The dishtables should have adjustable feet to adjust the angles.
4. Use a food grade silicon sealant to seal the joints between the dishtables and the dishwasher.

## Install a table-limit switch

A table-limit switch prevents damage to the dishwasher conveyor drive if dishracks pile up on the unload dishtable and jam the conveyor.

**A TABLE-LIMIT SWITCH INSTALLATION KIT, P/N 407400** with installation instructions is available from Champion.

### **!!ATTENTION!!**

**Damage to the dishwasher conveyor drive can happen  
when dishracks jam together on the unload dishtable.**

**Champion strongly recommends  
the installation of a table-limit switch to prevent  
dishrack jams at the unload of the dishwasher.**

## Final Installation Checks

1. Remove any foreign material from inside of the machine.
2. Check dishwasher drain/overflows are closed
3. Install scrap screens and baskets
4. Turn utilities on.
5. Turn dishwasher on to fill tanks with water.
6. Check tank water temperatures reach proper levels.
7. Check for leaks.
8. Drain the dishwasher and check that floor drains handle the water volume leaving the dishwasher.

## Operation

### **IMPORTANT**

**Please read the steps below before you operate your dishwasher.**

1. Make sure the dishwasher was properly installed and tested prior to operation.
2. Read the operating instructions completely before you operate your dishwasher for the first time.
3. Keep these instructions available for quick reference.
4. Contact your supervisor immediately if you have questions about the dishwasher.
5. Contact your local authorized Champion service agency for technical support.
6. Our National Service Department provides 24 hour support 365 days a year with a Toll-free number in the United States.

**USA National Service**  
**M-F • 8 AM - 5PM EST**  
**Toll-free: 1 (800) 858-4472**

*In the USA, a factory technician will return your call after-hours and during holidays.*

***or***

**Canadian National Service**  
**M-F • 8:30 AM - 4:30PM EST**  
**Toll-free: 1 (800) 263-5798**

## Operation

Follow the procedure below to operate your dishwasher properly.

1. Check that the spray pipes, curtains, and scrap screens are in place and clean.
2. Check that the overflow drains are closed.
3. Turn on the detergent dispenser switches and check the detergent supply.
4. Turn on the exhaust vent system (if applicable), and make sure it is operating.
5. Close the door(s). Push the power switch ON, light will illuminate.  
Machine will begin to fill via the fill valve and the final rinse piping.
6. When the tanks are full, wait until the wash tank has reached the proper temperature.  
Check the wash tank temperature gauges located on the control cabinet. Minimum wash temperatures are:
  - 44 LT, 66 LT PW -140°F/60°C
  - 44, 54, 44 WS - 160°F/71°C
  - 66 PW, 76 PW, 66 WS PW - 160°F/71°C
7. Push the Green start button. The pushbutton illuminates indicating the dishwasher is ready for automatic operation.
8. Pre-scrap wares to remove large food particles and load wares into the dishracks.  
DO NOT OVERLOAD RACKS.
9. Pegged racks are for plates and/or trays. Flat racks are for bowls and/or silverware.  
Spread silverware evenly in a single layer in a flat rack or upright (loosely packed) in a cutlery rack/cylinder.
9. Push a dishrack into the load-end of the dishwasher until it contacts the idle pump switch lever; the conveyor and pumps will start.  
  
The dishwasher will run for 90 seconds to wash, rinse and move the dishrack out of the unload-end of the dishwasher.
10. Inserting another dishrack into the machine before the first rack exits will keep the dishwasher running until the last dishrack exits the machine.
10. Check the final rinse pressure and temperature as the racks pass through the final rinse. This final rinse pressure MUST be 20-22 psi [138-151 kPa] and the final rinse temperature MUST be a minimum of 180°F/82°C .
11. The pumps and the conveyor drive will automatically stop after the last rack exits the machine.
12. The machine may be stopped at any time during the cycle by pressing the red STOP pushbutton. The green light will go off on the green START pushbutton.
13. Check the interior of the dishwasher for any dishracks still in the machine.  
These dishracks must be washed again to ensure they are washed and sanitized completely.
14. To restart, push the green START pushbutton and push another dishrack into the dishwasher load-end until the pumps and conveyor start again.
15. Repeat steps 7-10 until all wares are washed.

## Operation

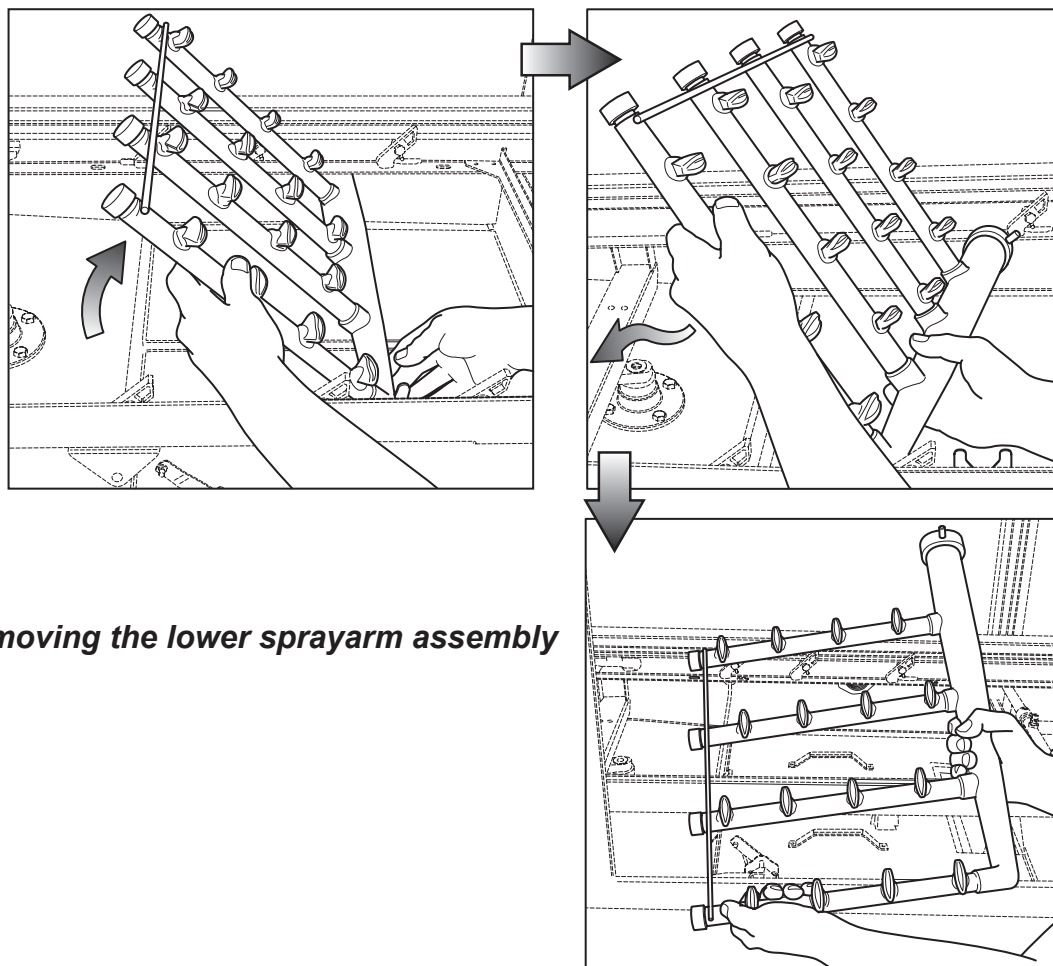
### Door Safety Switches

Dishwasher access doors are equipped with a door safety switch that automatically stops the dishwasher pumps and conveyor drive if a door is raised while the dishwasher is running. In addition, the dishwasher will not start if a door is left open.

1. If the dishwasher is running and a door is raised, then lighted GREEN START pushbutton goes out and the pumps and conveyor drive stop.
2. Check the interior of the dishwasher for any dishracks still in the machine. These dishracks must be washed again to ensure they are washed and sanitized completely.
3. To restart the dishwasher, make sure all doors are closed, then push the GREEN START pushbutton.
4. Insert a dishrack into the dishwasher until the pumps and conveyor run.

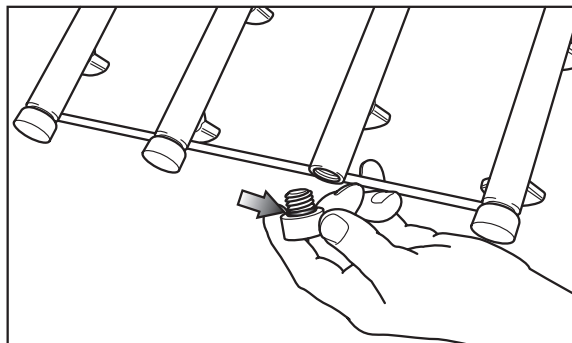
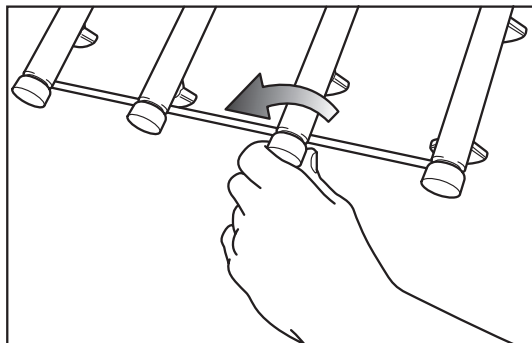
### Sprayarms and Scrap Screens

The illustrations below and on the proceeding pages illustrate how to install and remove the sprayarm assemblies and scrap screens.

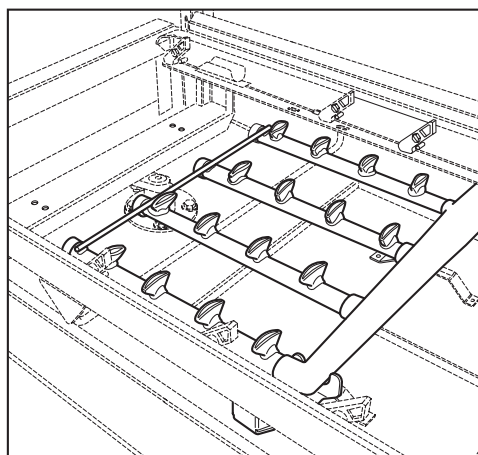
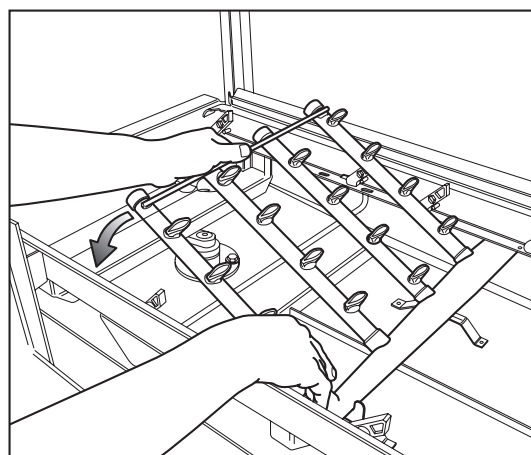
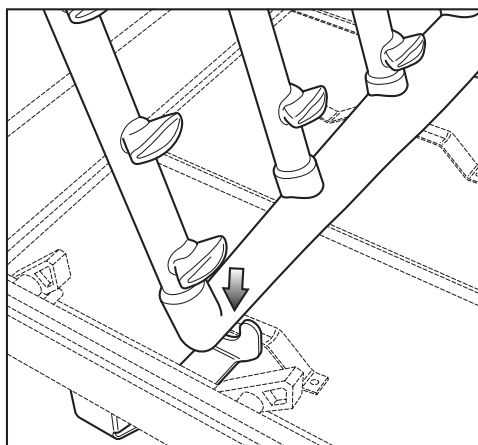
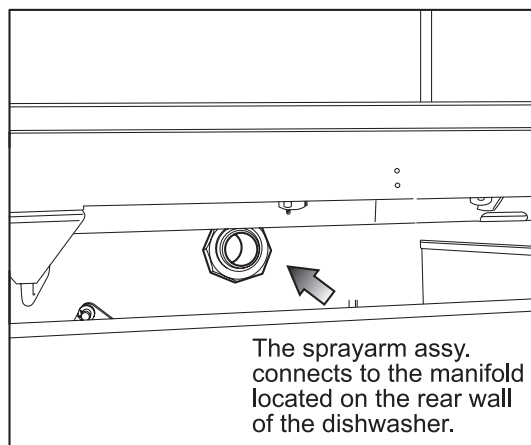


***Removing the lower sprayarm assembly***

### ***Removing the sprayarm end plugs for Cleaning***

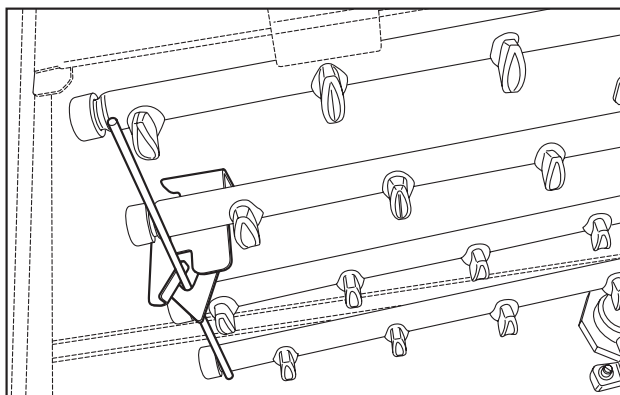
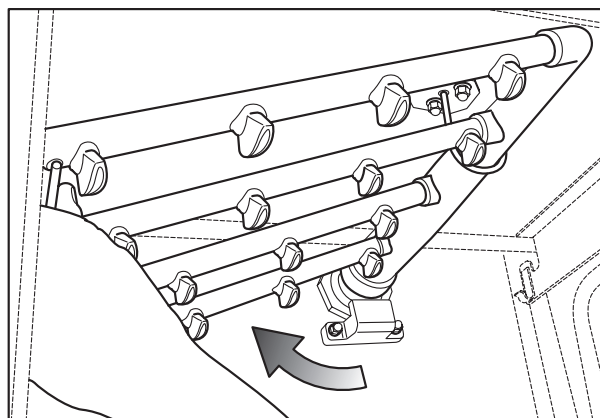
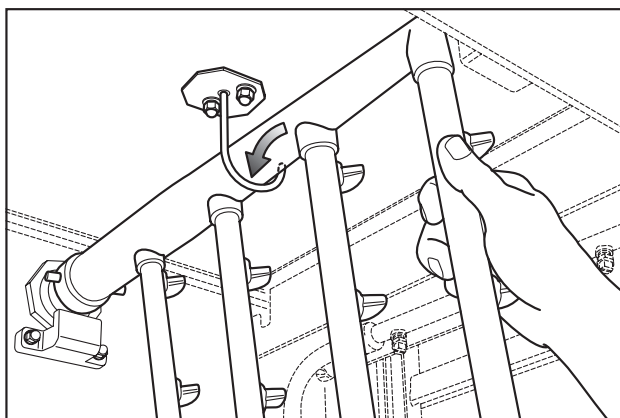


### ***Installing the lower sprayarm assembly***

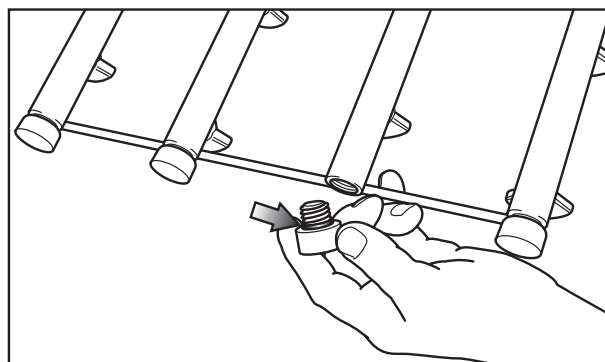
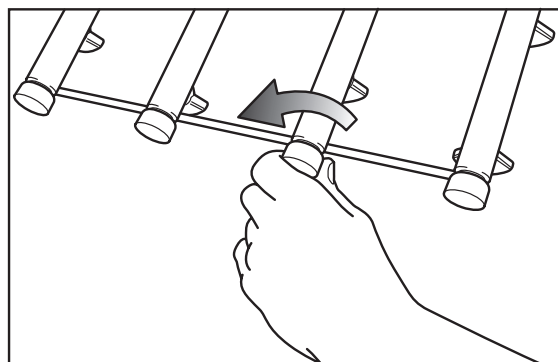




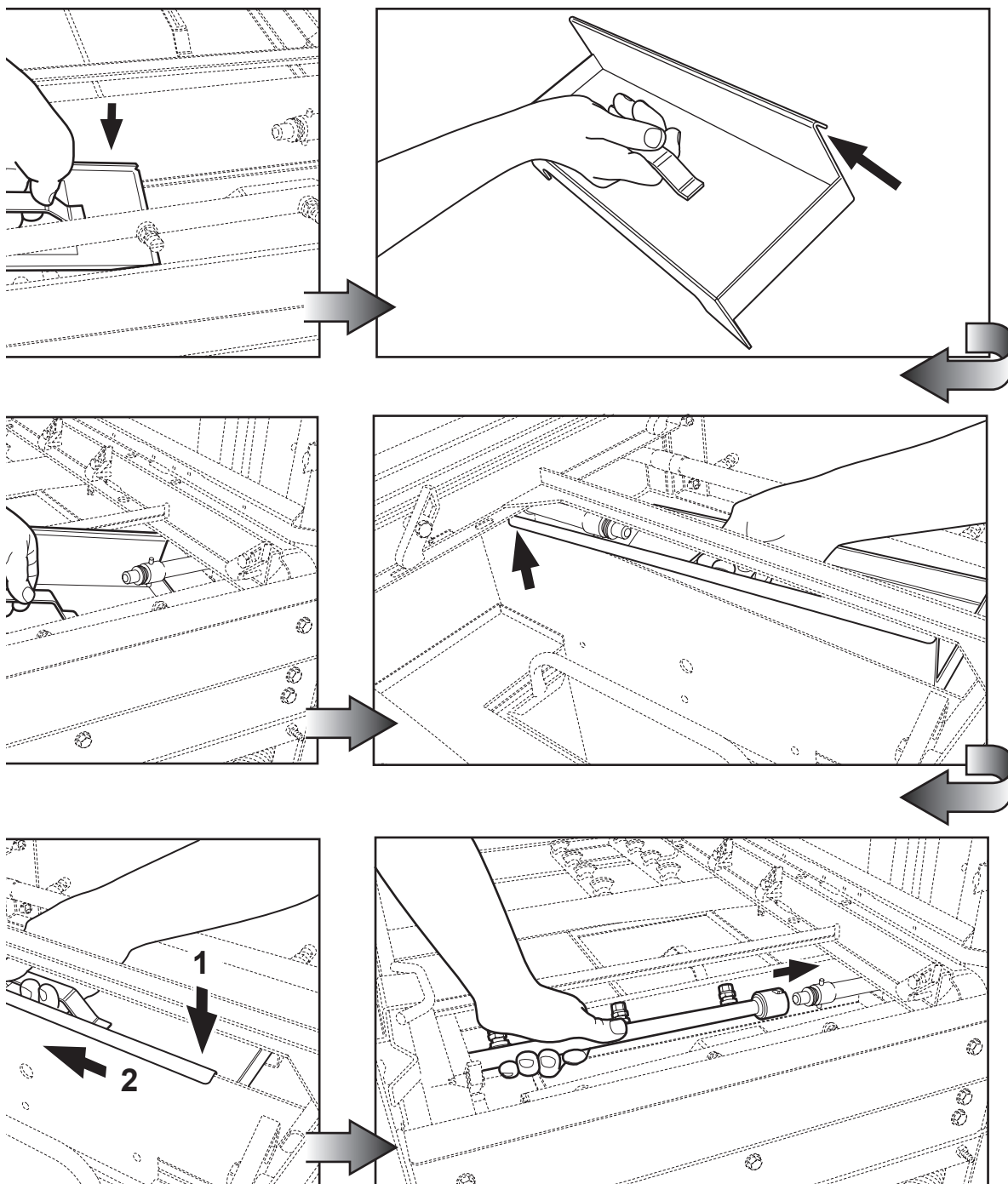
### ***Installing the upper sprayarm assembly***



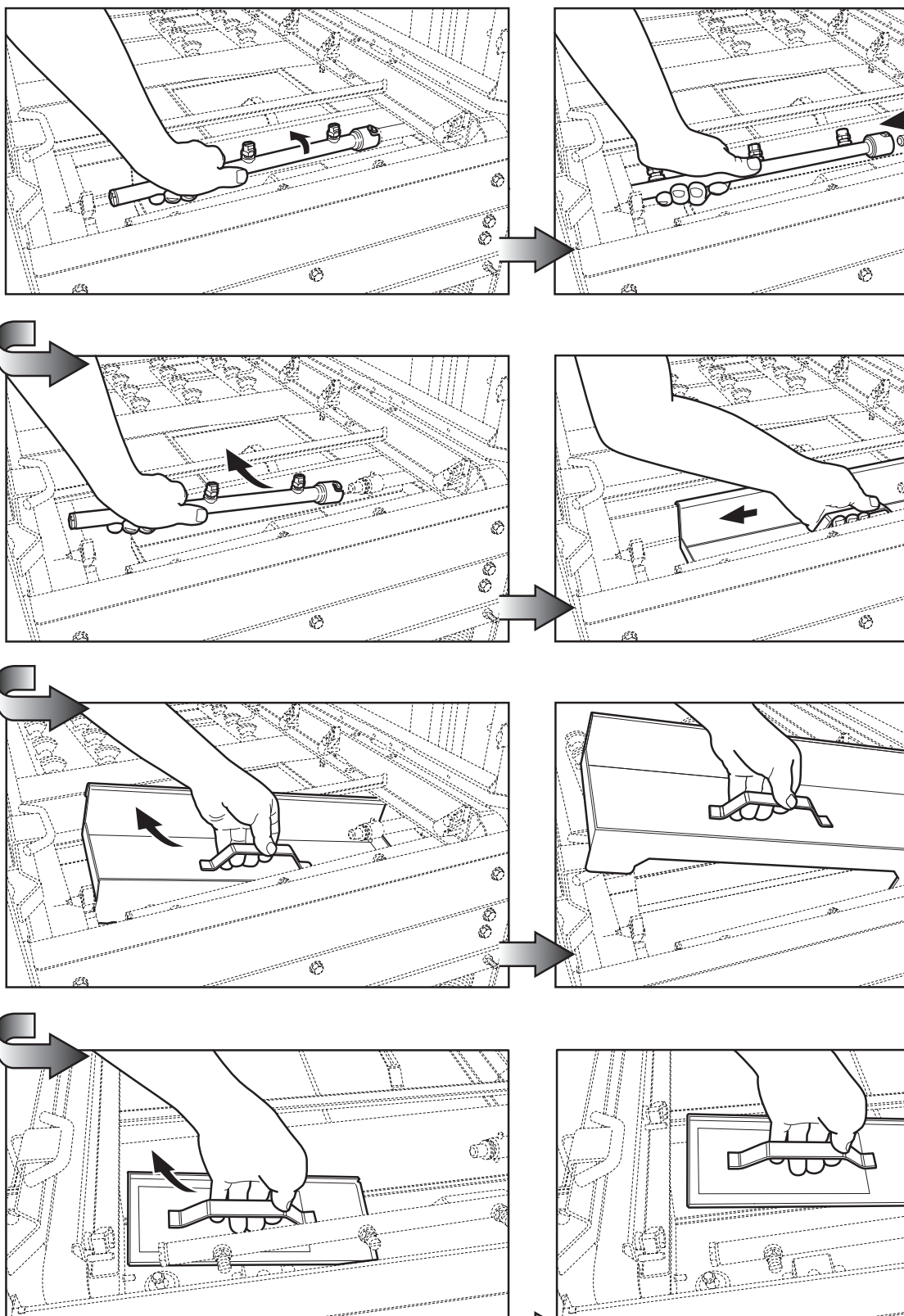
### ***Removing the sprayarm end plugs for cleaning***



**Removing the Dual Rinse (DR) scrap screens**



**Removing the Dual Rinse (DR) scrap screens** (continued)

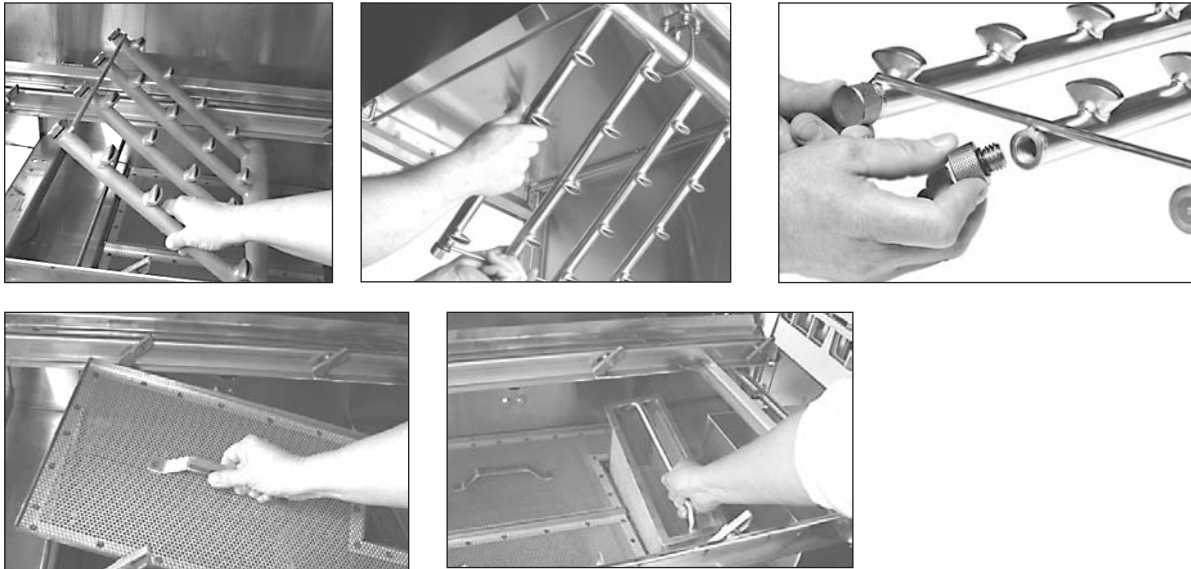


## Maintenance

Cleaning your dishwasher is the best maintenance you can do.

The cleaning intervals below are the minimum requirements for most dishwashers.

You may need to clean your dishwasher more often when washing heavily soiled wares or during long hours of continuous operation.



## Cleaning

### Cleaning Intervals

- Daily or every 2 hours of operation
  1. Turn power switch to OFF.
  2. Pull drain lever(s) to drain water. Remove scrap screens and scrap baskets. Clean inside of the tanks and flush with clean water. Back flush the scrap screens until clean.

### **DO NOT STRIKE SCREENS OR BASKETS AGAINST SOLID OBJECTS**

3. Remove the sprayarm assemblies. Remove the end cap from each sprayarm. Flush the sprayarms and nozzles to remove any debris. Replace the end caps. Check the condition of the manifold O-ring. Reinstall the sprayarms.
4. Remove and clean the curtains. Allow them to dry at the end of the day.
5. Leave the doors open between operations, allowing the machine to dry.
6. Make sure that the final rinse nozzles are clear of mineral deposits. Straighten a metal paper clip to clean the nozzles.
7. Check the temperature and pressure gauge readings during operation.
8. Inspect the machine for signs of water leaks.
9. Check the chemical supplies and refill as necessary.
10. Report unusual conditions to your supervisor.

## Cleaning

- Weekly
  1. Inspect all water lines for leaks and tighten at joints if required.
  2. Clean any detergent residue from the exterior of the machine.
  3. Check that the drain/overflow pipes seat tightly in their drains.
  4. Clean any accumulated scale from the heating element.
  5. Inspect the sprayarms for any damage or missing parts.
  6. Inspect the final rinse arms for missing parts.
  7. Inspect the pawl bar and drive assembly for damage or missing parts.
  8. Check that float switches move freely.
  9. Check the idle pump actuator and the final rinse actuator for freedom of travel.

## Deliming

The word **SCALE** refers to the mineral deposits that form as a white film inside and sometimes outside the dishwasher. If allowed to build-up, scale can significantly reduce the performance and life-span of a dishwasher.

Scale must be removed using strong chemicals (deliming agents) that are supplied by a qualified chemical supplier. Your supplier will explain the safety procedures you must follow to prevent personal injury and possible damage to the dishwasher.

Deliming agents vary in composition and strength so it is impossible for Champion to provide detailed instructions for the large number of products on the market; therefore, Champion strongly recommends that you do not use any deliming agent without the proper training.

### **WARNING:**

**Death or injury can result from toxic fume when deliming agents come in contact with Chlorine Bleach, or other chemicals that contain iodine, bromine, or fluorine. Clothing as instructed by a qualified chemical supplier.**

**USE EXTREME CAUTION WHEN HANDLING ANY DELIMING AGENT**

### **CAUTION:**

**Deliming agents can cause chemical burns. Wear rubber gloves, eye protection and any other protective clothing as instructed by a qualified chemical supplier.**

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***Basic Service***



## Electrical Service

### Fuse Blocks - 120VAC Control Voltage

Two fuse blocks, located in the center of the front of the main control cabinet protect the main control transformer. Each fuse block holds one fuse. Always replace a blown fuse with a fuse of the same AMP rating. DO NOT INCREASE THE FUSE RATING.

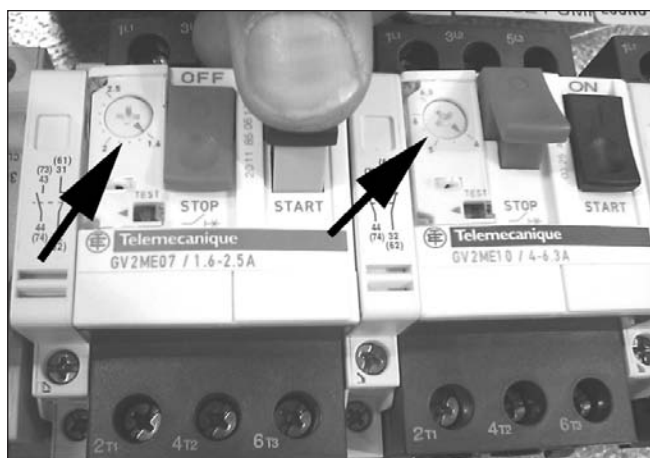


### Motor Overloads

Motor overloads are located to the left of the fuse block inside the control cabinet. Each motor has one overload to protect it from line voltage electrical overloads. In addition, an auxiliary set of switch contacts is attached to the overload. The switch contacts disconnect 120VAC power to the motor contactor coils in the event of an overload condition.

A motor Overload has 2 rocker switches, OFF/STOP and ON/START.

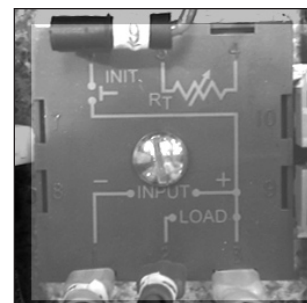
- The motor overload has tripped if the Off/Stop switch is in the Off position. Set the rocker switch to STOP. Then, push the ON/START rocker switch to the ON position
- The motor overload rocker switch is in the START position when the pump is ON and in the STOP position when the motor is OFF.
- Turn the dishwasher power ON and insert a dishrack to start the pumps and conveyor. Troubleshoot the motor circuit. The motor overload may be faulty if motors are OK.
- Arrows indicate the Full load Amp (FLA) adjustment screws. Each screw should be set to the FLA rating found on the motor the data plate.



### Pump/Conveyor Run Timer

The solid-state pump/conveyor run timer is a fixed 90-second timer that controls the maximum time that the pumps and conveyor drive motor runs after a dishrack enters the load-end of the dishwasher. 90-seconds is the time necessary for 1 dishrack to complete its travel through the dishwasher ensuring that wares are washed and rinsed before exiting the machine.

The timer resets to 90-seconds each time a dishrack enters the dishwasher. This ensures that every dishrack is processed completely.



A faulty pump/conveyor run timer is possible if the 90-second run time is off by plus or minus 2-seconds. The idle-pump start switch located on the load-end dishwasher should be checked for proper operation before replacing the timer.



Electrical Service (*continued*)

## **Pump/Conveyor Timer**

Timer Sequence of Operation:

- A dishrack entering the machine contacts the idle pump switch lever.
- The contacts of the idle pump switch open, de-energizing control relay 1CR.
- Normally closed contacts of 1CR close and apply a signal to pump timer. The timer contacts close turning on the pump(s) and drive motor
- The dishrack moves off the idle pump switch lever and the switch contacts close.
- 1CR energizes and the notmally closed contacts open removing the signal from the pump timer.
- The pump timer begins to time down for its 90 seconds time setting.
- The timer is reset each time the idle pump switch is activated. If the timer is reset only once it will time out and shut the pump(s) and drive motor off after the time delay.

To Check the Pump Timer Setting:• Turn the power on.

- Press the green lighted START pushbutton.
- Place a rack in to the conveyor.
- When the rack enters the load end, the pump(s) and the drive motor will start.
- Time the conveyor and when the rack clears the idle pump switch.  
Note the elapsed time when the machine stops. The elapsed time should be within 2-seconds of the timers 90-second setting.the timer.
- Replace the timer if the is off more than 2-seconds.

## Electrical Service *(continued)*

### Automatic Fill/Low Water Heat Protection

#### Dual Float Switches

Each tank contains a dual float switch.

The part consists of an angled stem containing two reed switches. Two stainless steel ball floats, containing magnets, slide over the stem and are free to move up and down. When the float moves on the stem, it opens and closes the associated reed switch inside the stem. The reed switches control relays. The relays control the automatic fill and heat for different parts of the machine. The float switch(es) and their relay(s) operate on a 120VAC circuit.



#### Operation Sequence

##### Bottom Float and Reed Switch

- The bottom float controls the heat.
- When the bottom float is down, the bottom reed switch contacts are open.
- When the bottom float is up, the bottom reed switch contacts are closed.

##### Top Float and Reed Switch

- The top float controls a fill valve, which controls the water level.
- When the top float is down, the top reed switch contacts are open.
- When the top float is up, the top reed switch contacts are closed.

#### Initial Fill

- When the tank is empty, both floats are down and their reed switch contacts are open.
- The control relay for the float switch is de-energized.
- The fill valve for the tank is energized and the tank begins to fill with water.
- As the water level in the tank rises, the bottom float begins to move up.
- When the bottom float is completely up, its reed switch contacts close.
- This prepares the heat circuit, but the heat DOES NOT energize at this time.
- The tank continues to fill until the top float is completely up.
- The top float's reed switch contacts close. Its control relay energizes.
- The fill valve de-energizes.
- The heat circuit energizes through the contacts of the control relay.

## Automatic Fill/Low Water Heat Protection

### Dual Float Switches *(continued)*

#### During Normal Operation

- If the water level in a tank falls below the level of the top float, the top float moves down and its reed switch contacts open.
- When the water level falls below the level of the bottom float, the bottom float moves down and its reed switch opens.
- The control relay de-energizes. The fill and rinse valve energizes and refills the tank.
- The heat circuit will de-energize until the water level in the tank raises the top float again.
- The bottom float keeps the heat circuit ready as long as the water level is above the level of the bottom float.

#### Electric Tank Heat Control and High-limit Thermostats

Two thermostats regulate the temperature for wash tanks, final rinse boosters, and dual rinse electric heaters.

**Control thermostats** are adjustable from 110°F to 195°F.

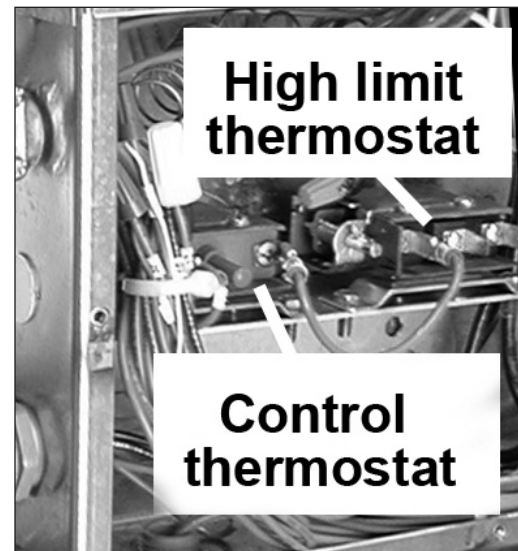
Turn the thermostat adjusting screw CW to increase the temperature or CCW to decrease the temperature.

**High-limit thermostats** are not adjustable. They prevent the electric heaters from overheating in the event that a control thermostat or some other component fails.

Wash tank control and high-limit thermostats are located in junction boxes mounted to the front of the wash tank.

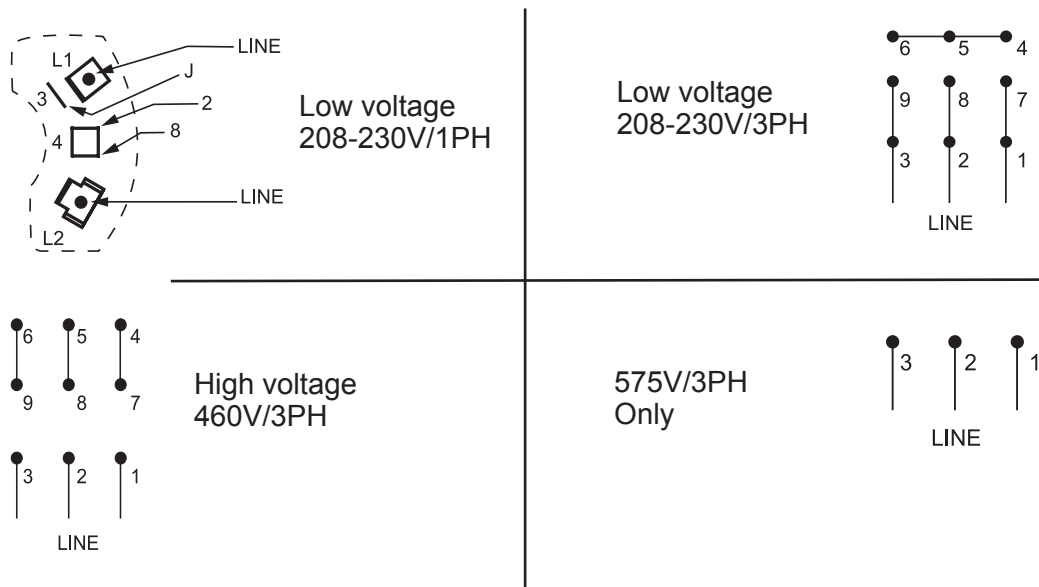
Electric booster control and high-limit thermostats are located on the base of the dishwasher adjacent to the booster heaters.

Dual rinse tank control thermostats are located on the front of the unload-end of the dishwasher. The high-limit thermostat is a surface thermostat and is mounted on the end of the dual-rinse tank.



Multi-Voltage Pump Motors:  
Low voltage: 208-230VAC  
High voltage: 460VAC or 575VAC

### Motor Connections:



### Troubleshooting

#### Motor will not run

1. Check incoming power to control cabinet.
2. Check for tripped manual motor starter (overload) in control cabinet. (Refer to Motor Overload service section for proper settings).
3. Check power at motor contactor.

#### Motor runs hot and trips motor starter overload

1. Check for proper voltage between L1-L2 or (L1-L2, L2-L3, L1-L3 for 3 phase).
2. Check FLA on motor leads L1, L2, (also L3 for 3 phase) using amp tester. (Motor full load amp (FLA) ratings are stamped on motor nameplate).

#### Motor Replacement

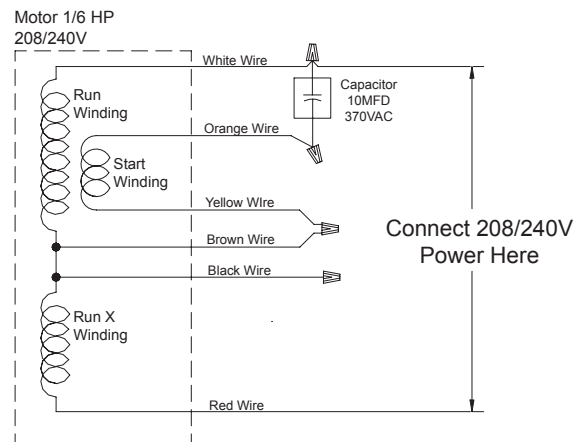
1. Disconnect the power to the machine.
2. Disconnect the wires to the motor junction box.
3. Make note of the motor connections in order to phase the replacement correctly.
4. Install the new motor and check for proper rotation. (Proper rotation is clockwise looking from at the rear of the motor).
5. Motor rotation can be reversed by switching L1 and L2 on three phase motors. Single phase motor rotation cannot be reversed.

## Motors-Drive

Voltage: Standard motors are multi-voltage  
 Low Voltage: 208-240VAC 1 Phase Only  
 High Voltage: 380/480/575VAC 3 Phase Only

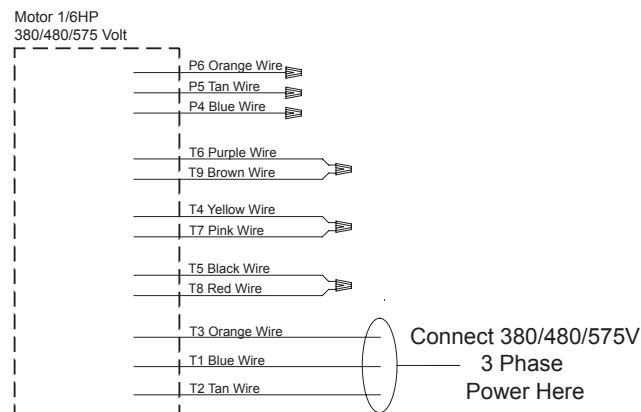
### 208-240V 1Phase Wiring Diagram

To reverse motor rotation interchange yellow and orange leads.



### 380/480/575V 3Phase Wiring Diagram

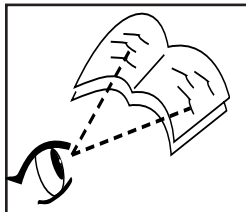
To reverse motor rotation interchange any two external connections.



### Conveyor Drive Jam Switch

- The conveyor jam switch stops the conveyor if something obstructs the movement of the rack conveyor.
- The light on the green start switch goes out and the pumps and the conveyor drive motor stop running.
- After clearing the jam, push the green start button and insert another dishrack to restart the pumps and conveyor. Be sure to wash any dishracks that may have been stalled in the dishwasher prior to the jam condition.

## Mechanical Service • Pump Seal Replacement

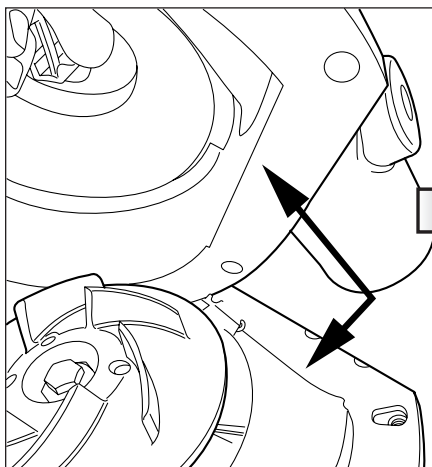


### NOTE !

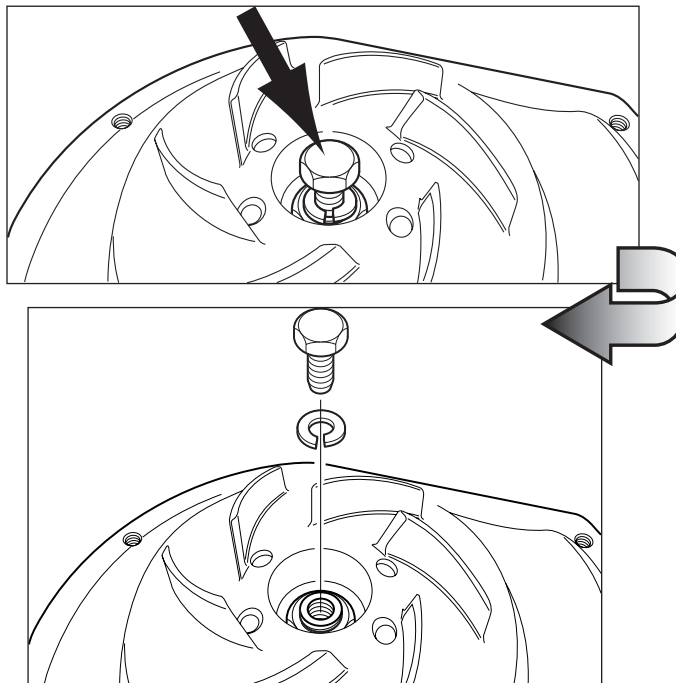
Study the instructions below  
before you replace a pump seal.

### Remove Defective Pump Seal

1. Disconnect the power to the machine.
2. Disconnect the wires at the motor junction box.
3. Make note of the motor connections in order to phase the replacement correctly.
4. Remove pump/motor assembly to a clean work area.
5. Follow the diagrams below for pump disassembly and seal replacement.

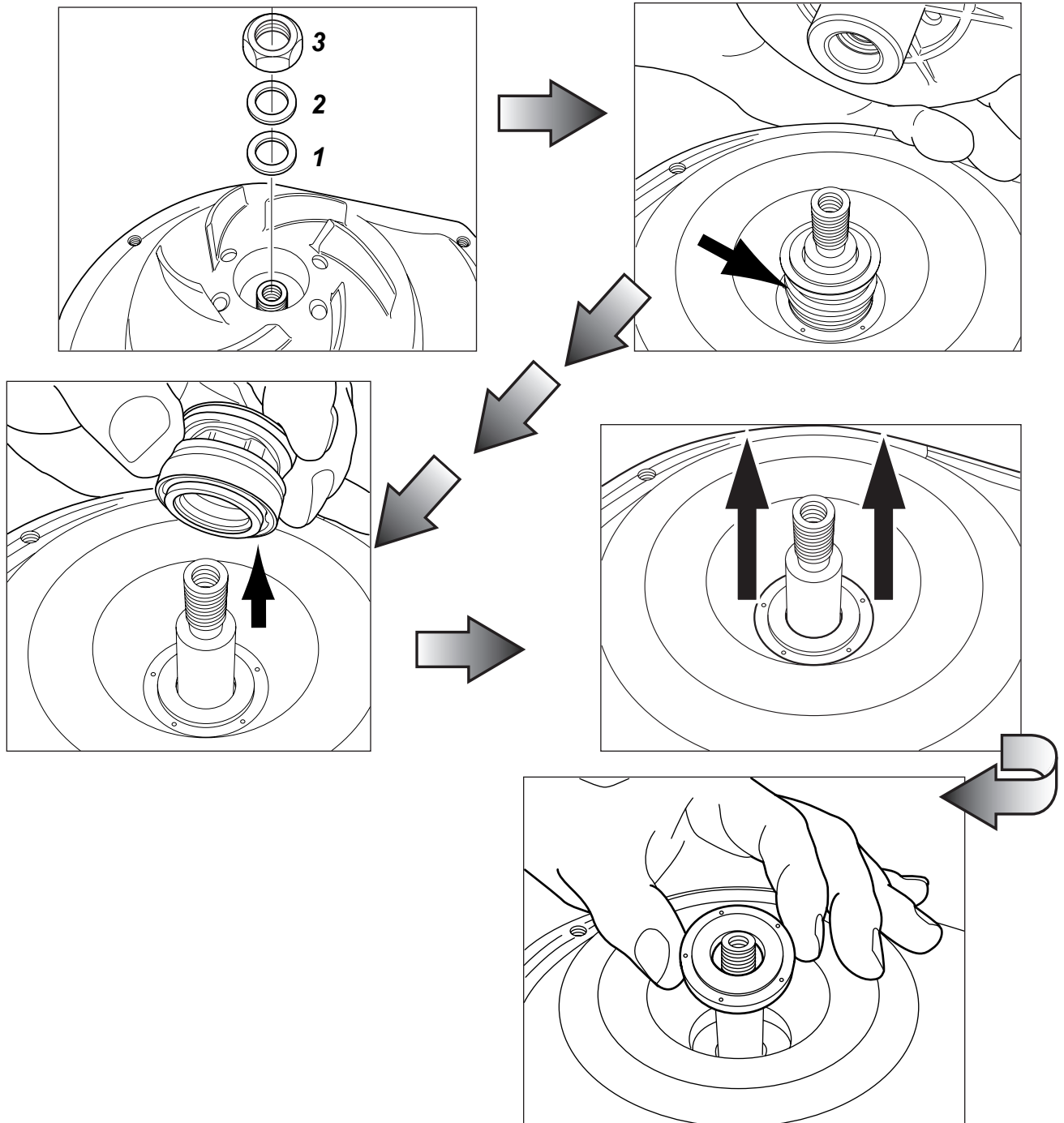


Mark alignment of motor and pump  
Remove pump volute.



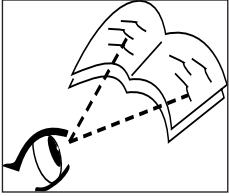
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**Mechanical Service • Pump Seal Replacement**



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## Mechanical Service • Pump Seal Replacement



### NOTE !

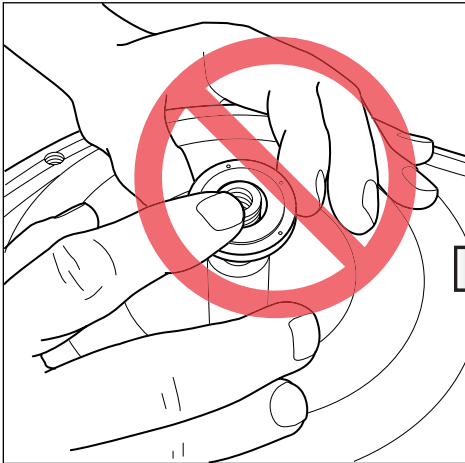
Replace the pump motor if motor shaft is grooved, pitted, or bent.

Clean rust and debris from seal seat and motor shaft. Debur with fine finishing paper specifically designed for metal surfaces.

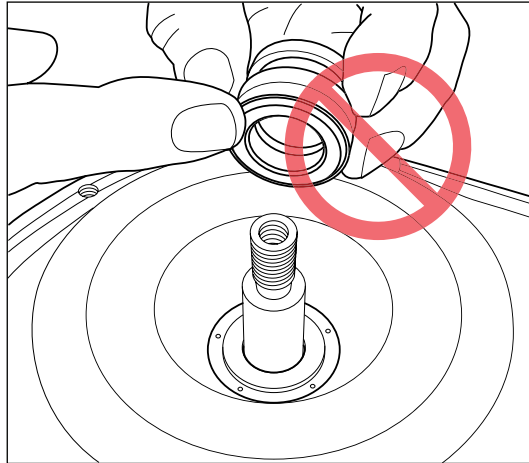
Use a new seal assembly preferably from an unopened package. The wax paper, and paper disk between the seal parts should be intact.

Avoid touching the graphite or the ceramic surfaces of the seal assembly. Check both surfaces for cracks, chips, oil or grease. Discard the seal and get a new one if any damage is found.

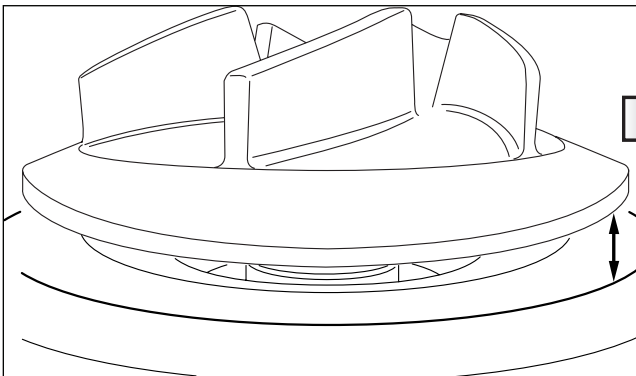
### Install New Pump Seal



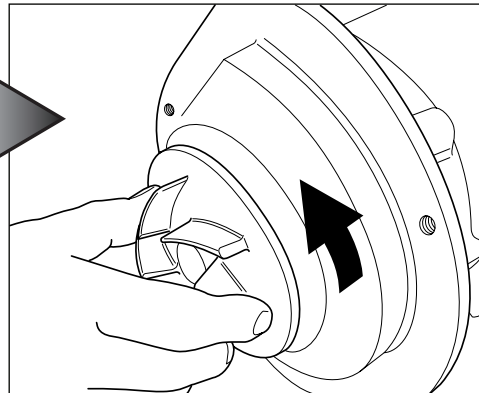
DO NOT TOUCH CERAMIC



DO NOT TOUCH GRAPHITE



Impeller and pump housing do not touch

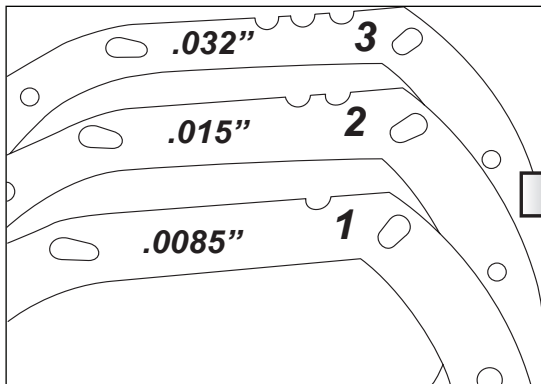


Turn impeller CCW. Properly installed pump seal prevents freewheeling.

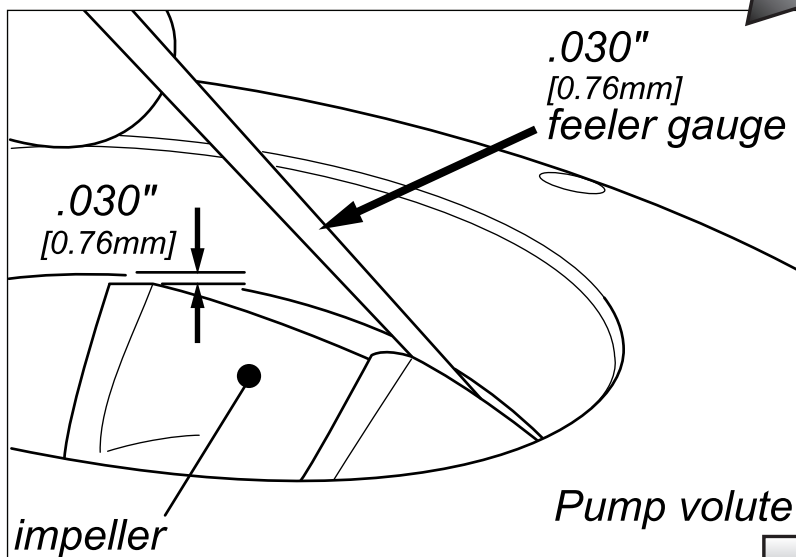
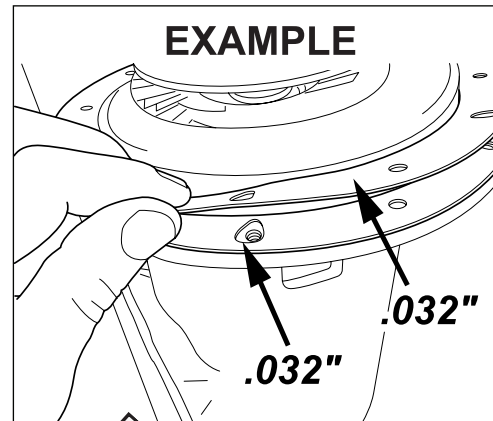
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## Mechanical Service • Pump Seal Replacement

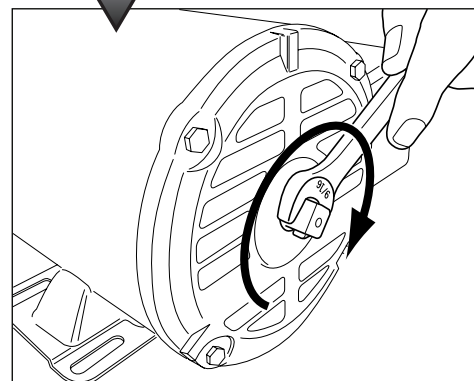


Use Champion OEM Shim/Gasket Kits Only: P/N 900737  
Number and thickness of shims will vary between pumps.  
Notches in a shim identifies thickness.



Measure gap between impeller vanes and pump volute.  
Minimum clearance must be .030" [0.76 mm].

Rotate the motor shaft CW to check proper clearance. Reinstall assembly and test run checking for leaks. Look at the rear of the motor to make sure motor shaft rotation is CW.



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## Mechanical Service • Replace Electric Booster Control Thermostat

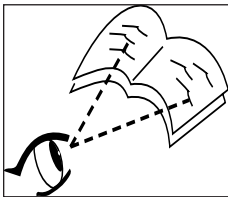


### **WARNING !**

ELECTRIC SHOCK may cause INJURY OR DEATH.

DO NOT WORK ON AN ENERGIZED CIRCUIT.

Turn off the main power service disconnect switch.  
Attach a label to the breaker indicating that work is being made on the electrical circuit.



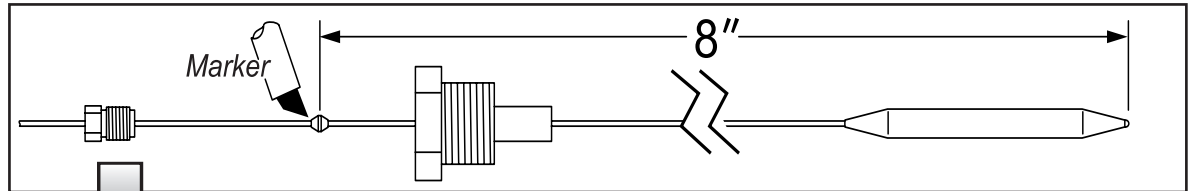
### **NOTE !**

READ ALL OF THE THERMOSTAT INSTRUCTIONS BEFORE YOU REPLACE THE CONTROL THERMOSTAT USED IN AN ELECTRIC BOOSTER HEATER.

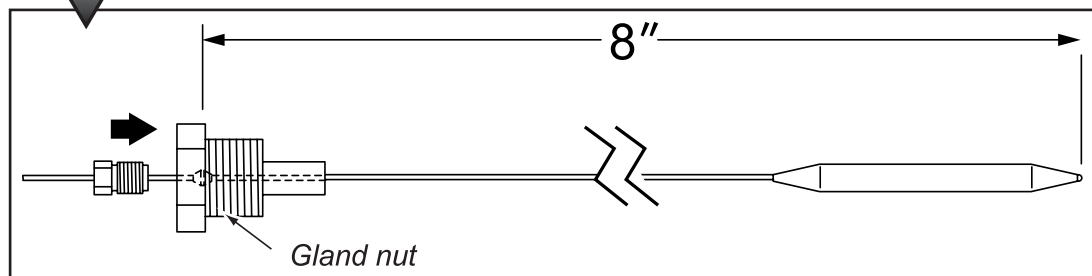
IMPROPER INSTALLATION CAN CAUSE FINAL RINSE TEMPERATURE PROBLEMS.

1. You will need a permanent marker such as a SHARPIE® or comparable in order to mark the control thermostat capillary tube.
2. Do not crimp the thermostat capillary tube.
3. The ferrule cannot be repositioned after the gland nut has compressed the ferrule on the capillary tube.
4. The control thermostat fitting is located on the left underside of the booster tank when viewing the booster tank from the front.

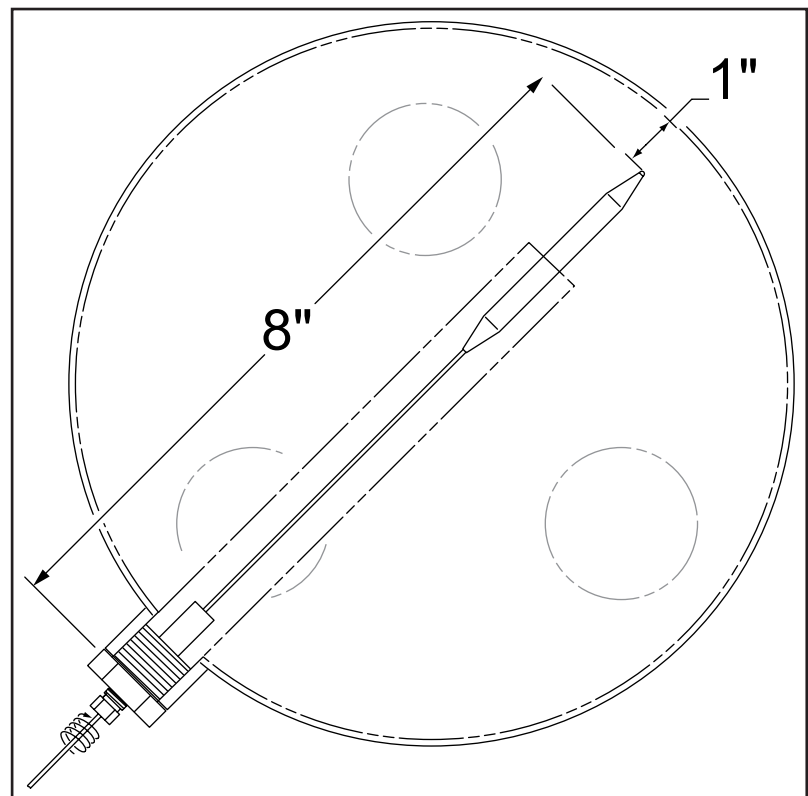
## Mechanical Service • Replace Electric Booster Control Thermostat



Slide ferrule 8" away from the end of the thermostat probe and mark.



Thread gland nut into booster tank fitting.



Insert thermostat probe into booster tank taking care not to crimp capillary tube.

Slide ferrule and small gland nut up to mark on capillary tube.

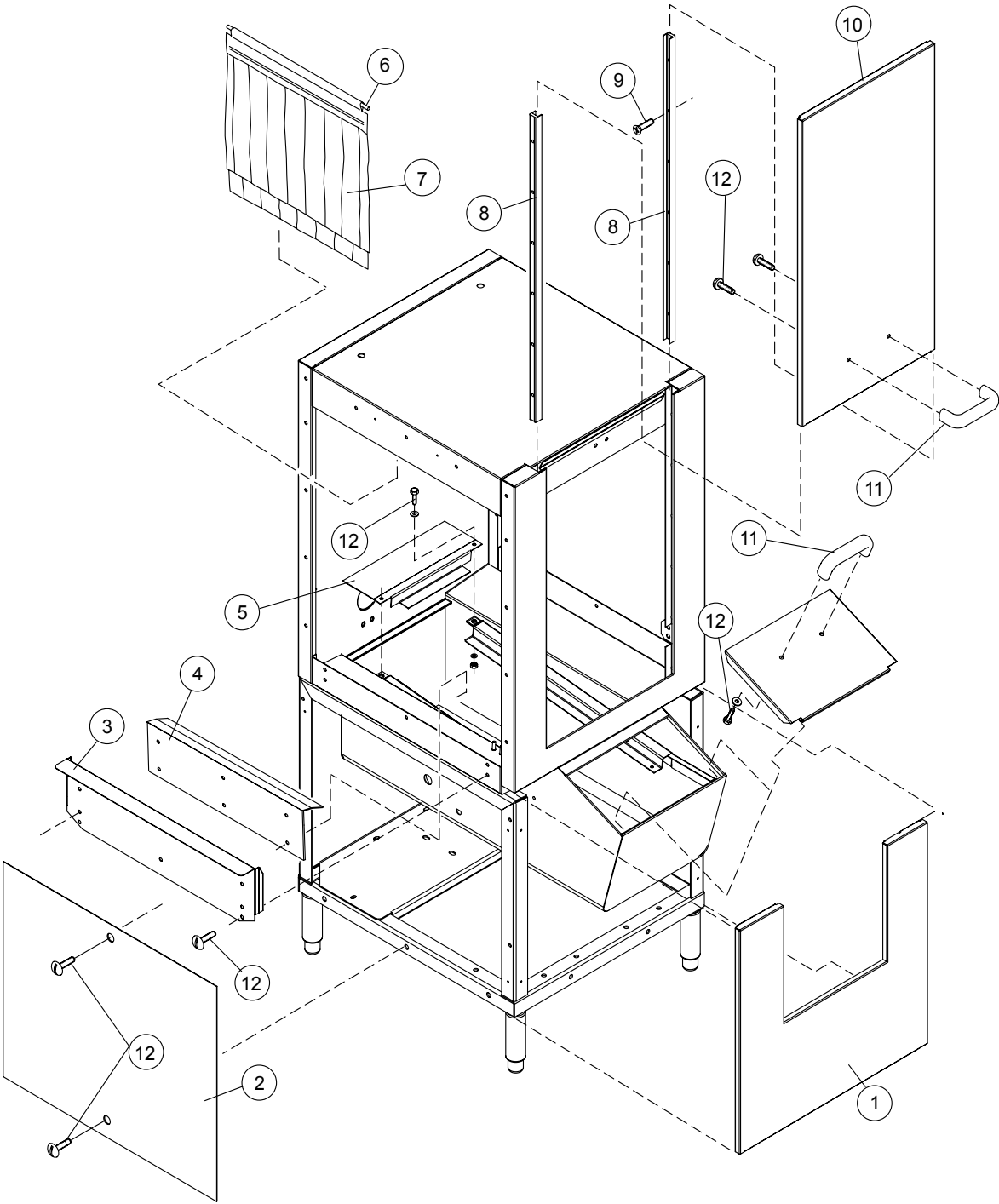
Tighten small gland nut to seal the assembly.

Complete the installation of the thermostat body and check booster heater operation.

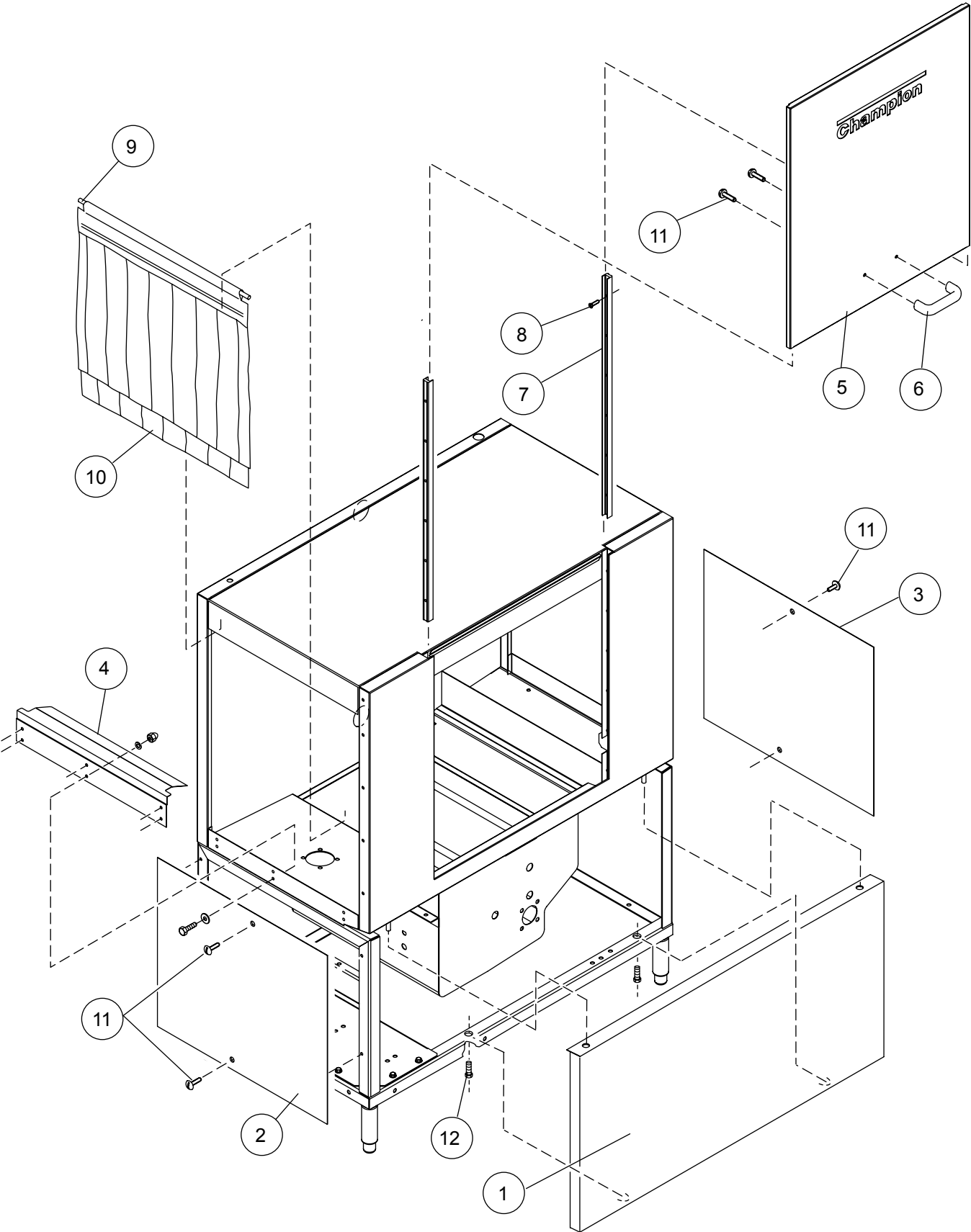
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## *Replacement Parts*

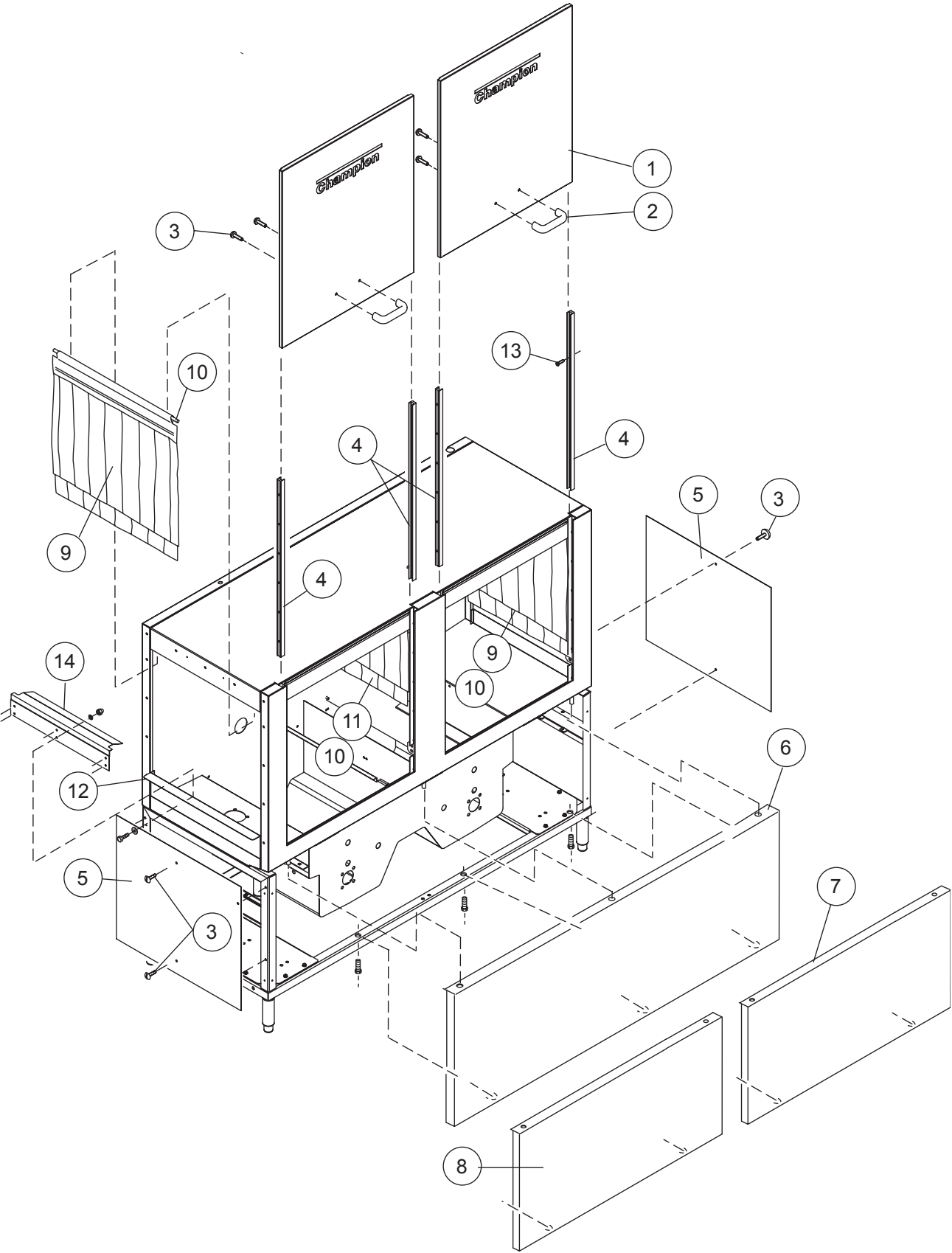


Item No.	Part No.	Description	Qty.
1	397970	Panel Assy. Front Perimeter 22" PW Prewash	1
---	328978	Panel Assy. Front Perimeter 36" Prewash	1
2	327857	Panel, 25" Prewash Perimeter	1
3	328030	Table Flange Support	1
4	329926	Baffle, Table Flange	
5	328006	Support, 22" PW Rear Screen	1
6	108250	Rod Curtain 5/16 x 24-5/8"	1
7	108043	Curtain 24 x 13-1/4"	1
8	113691	Guide, U-channel Door	2
9	113486	Screw 8-32 x 5/8" Flat Hd SST	12
10	327952	Door, 22" Prewash	1
---	111026	Magnet, Door (Not Shown)	1
---	113719	Switch, Reed Aleph (Not Shown)	1
11	108966	Door Handle	2
12	100073	Screw 1/4-20 x 1/2 Truss Head	2

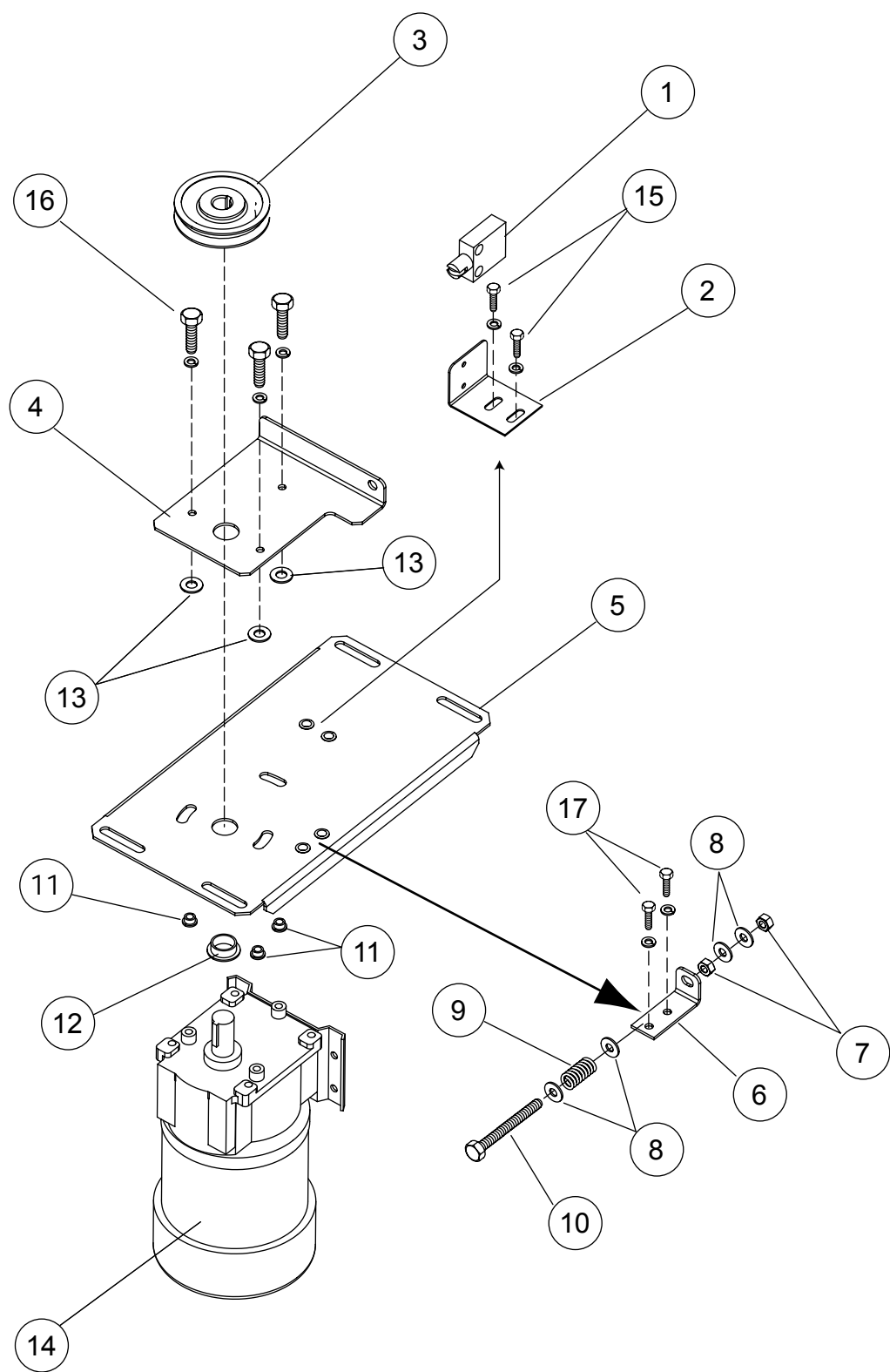




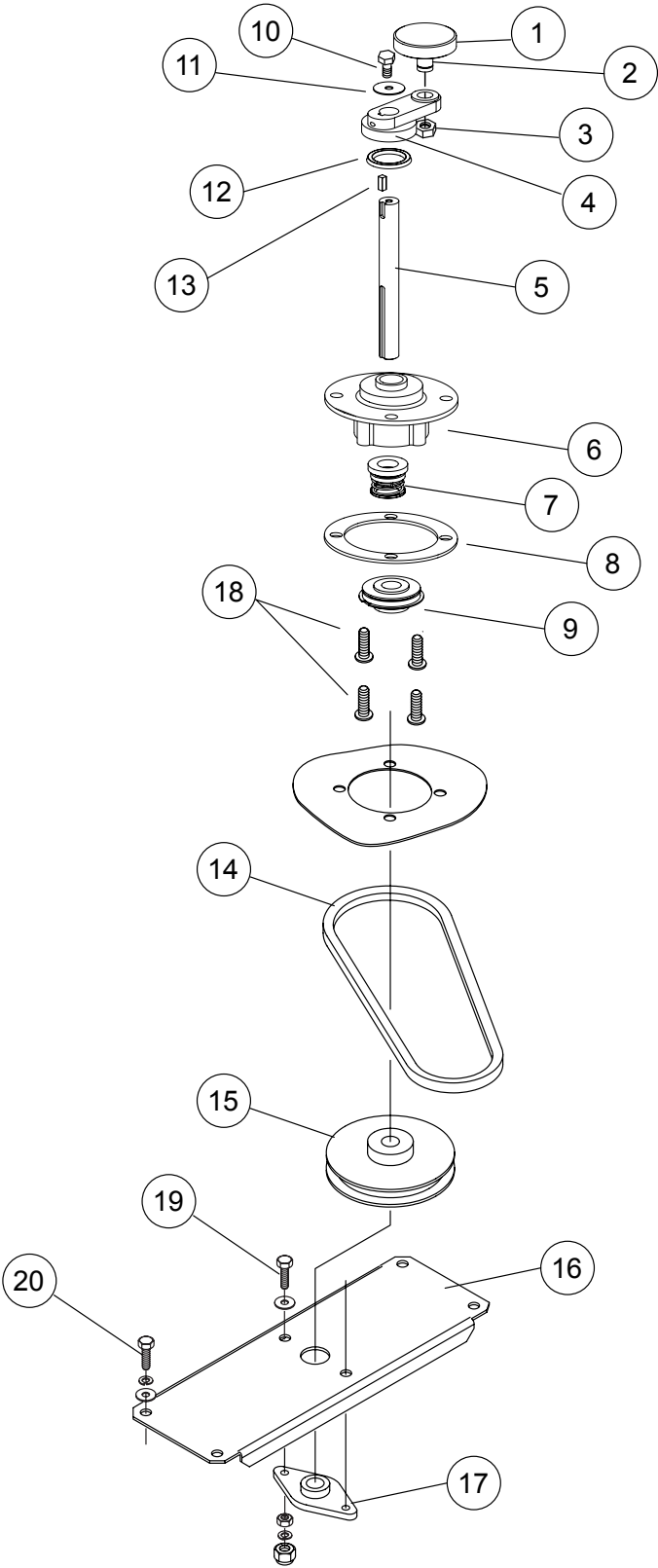
Item No.	Part No.	Description	Qty.
1	328974	Panel Assy., 44 Front Perimeter	1
2	327889	Panel, 25" Side Perimeter (Load, L-R, No PreWash)	1
3	327889	Panel, 25" Side Perimeter (Unload, L-R No Booster)	1
4	329926	Baffle	1
5	327857	Door	1
---	111026	Magnet, Door (Not Shown)	1
---	113719	Switch, Reed Aleph (Not Shown)	1
6	108966	Door Handle	1
7	113691	Guide, U-channel Door	2
8	113486	Screw, 8-32 x 5/8 Flat Head SST	12
9	108250	Rod, Curtain 5/16 x 24-5/8	3
10	113720	Curtain 24 x 20-1/4 4 Ply (Load and Unload)	2
---	109723	Curtain 24 x 6 -1/4 (Not shown)	1
11	100007	Screw 1/4-20 x 1/2 Truss Head SST	6
12	100734	Bolt 1/4-20 x 1/2 SST	3



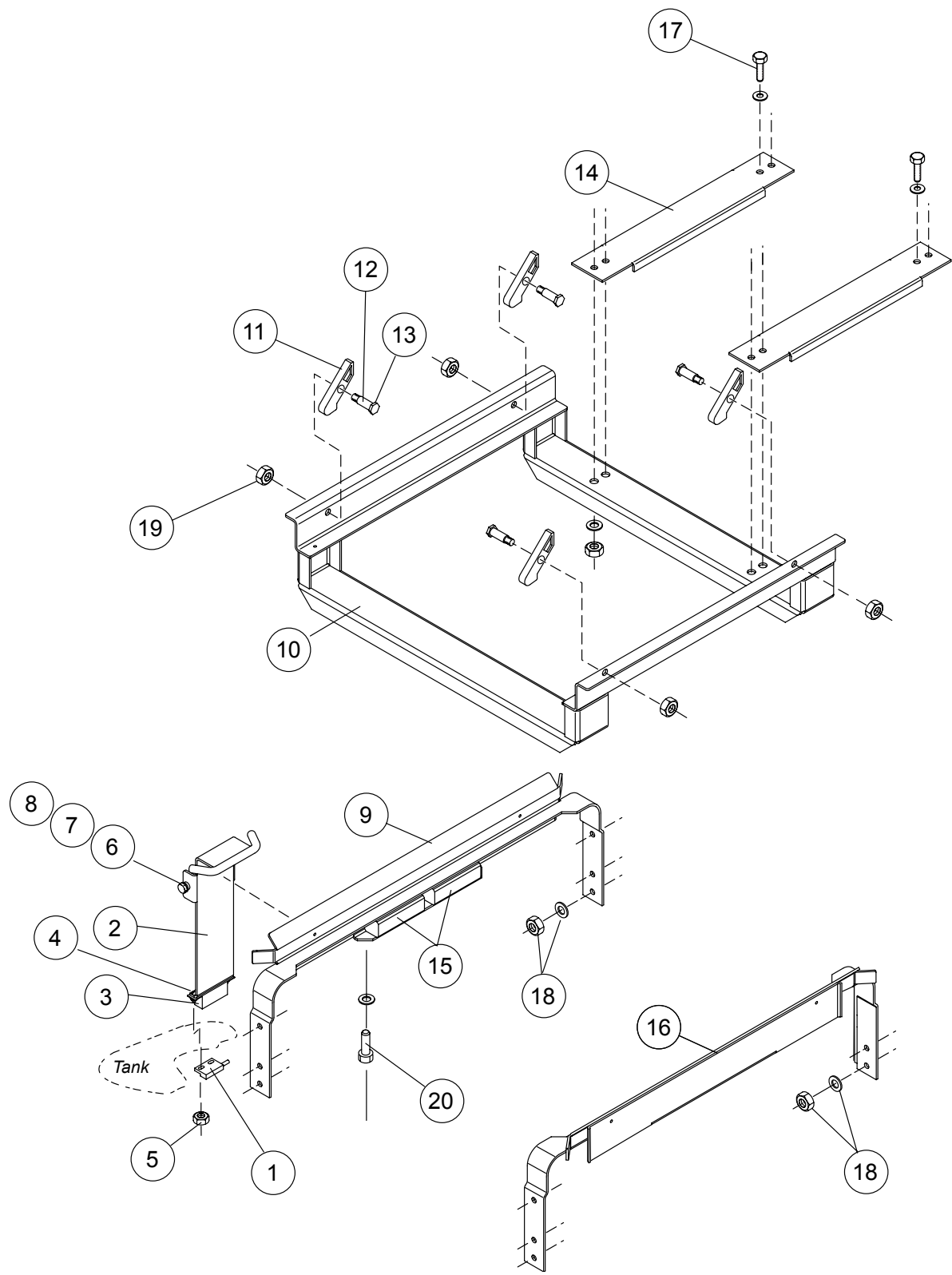
Item No.	Part No.	Description	Qty.
1	414303	Door Assembly Includes Items 2-3	2
---	327851	Door without handle	2
---	111026	Magnet, Door (Not Shown)	1
---	113719	Switch, Reed Aleph (Not Shown)	1
2	108966	Door Handle	2
3	100073	Screw 1/4-20 x 1/2 Truss Head	8
4	113691	Guide, U-channel Door	4
5	327889	Panel, 25" Side Perimeter (Load, No Prewash)	1
---	327889	Panel, 25" Side Perimeter (Unload, No Booster)	1
6	328975	Panel, 64 Front Perimeter	1
7	328976-01	Panel, 84 Front Perimeter Right Hand	1
8	328976	Panel, 84 Front Perimeter Left Hand	1
9	113720	Curtain 24 x 20" (Load/Unload)	2
10	108250	Rod, Curtain 5/16 x 24-5/8"	4
11	108043	Curtain 24 x 13-1/4" (Wash/Rinse)	1
---	109723	Curtain 24 x 6-1/4" (Rinse/Final Rinse)(Not Shown)	1
12	328030	Table Flange	2
13	113486	Screw 8-32 x 5/8 Flat Head SST	12
14	329926	Baffle	1



Item No.	Part No.	Description	Qty.
1	0509199	Drive Motor Switch	1
2	327918	Bracket, Motor Switch Mounting	1
3	103166	Sheave AK 39 5/8 Bore (44)	1
3	113893	Sheave AK 51 5/8 Bore (64)	1
4	327916	Plate, Drive Motor Mounting	1
5	327920	Plate, 44 Motor Assy Mounting	1
5	327917	Plate, 64 Motor Assy Mounting	1
6	327919	Bracket, Motor Spring Mounting	1
7	100154	Hex Nut Plain 5/16-18 SST	2
8	102376	Washer, Flat 5/16 x 3/4 x .06 SST	4
9	113702	Spring 0.6OD x 0.095 Wire x 1.5 Lg	1
10	113704	Screw, 5/16 x 3-1/2 Hex Head SST	1
11	113700	Bushing 3/8 x 3/4 x 1/16 Thrust Bronze	3
12	113703	Bushing, 3/4 x 7/8 x 3/8 x 1-1/8 Flg	1
13	113701	Bushing 1/4 x 3/8 x 1/2 x 1/16 Flg Bronze	1
14	113732	Motor, Gear 1/6HP 3PH	1
14	113679	Motor, Gear 1/6HP 1PH	1
15	100734	Bolt 1/4-20 x 1/2 Hex Head SST	2
---	106482	Washer Lock 1/4 Split	2
16	100736	Bolt 1/4-20 x 3/4 Hex Head	3
---	106482	Washer Lock 1/4 Split	3
17	100734	Bolt 1/4-20 x 1/2 Hex Head SST	2
---	106482	Washer Lock 1/4 Split	2

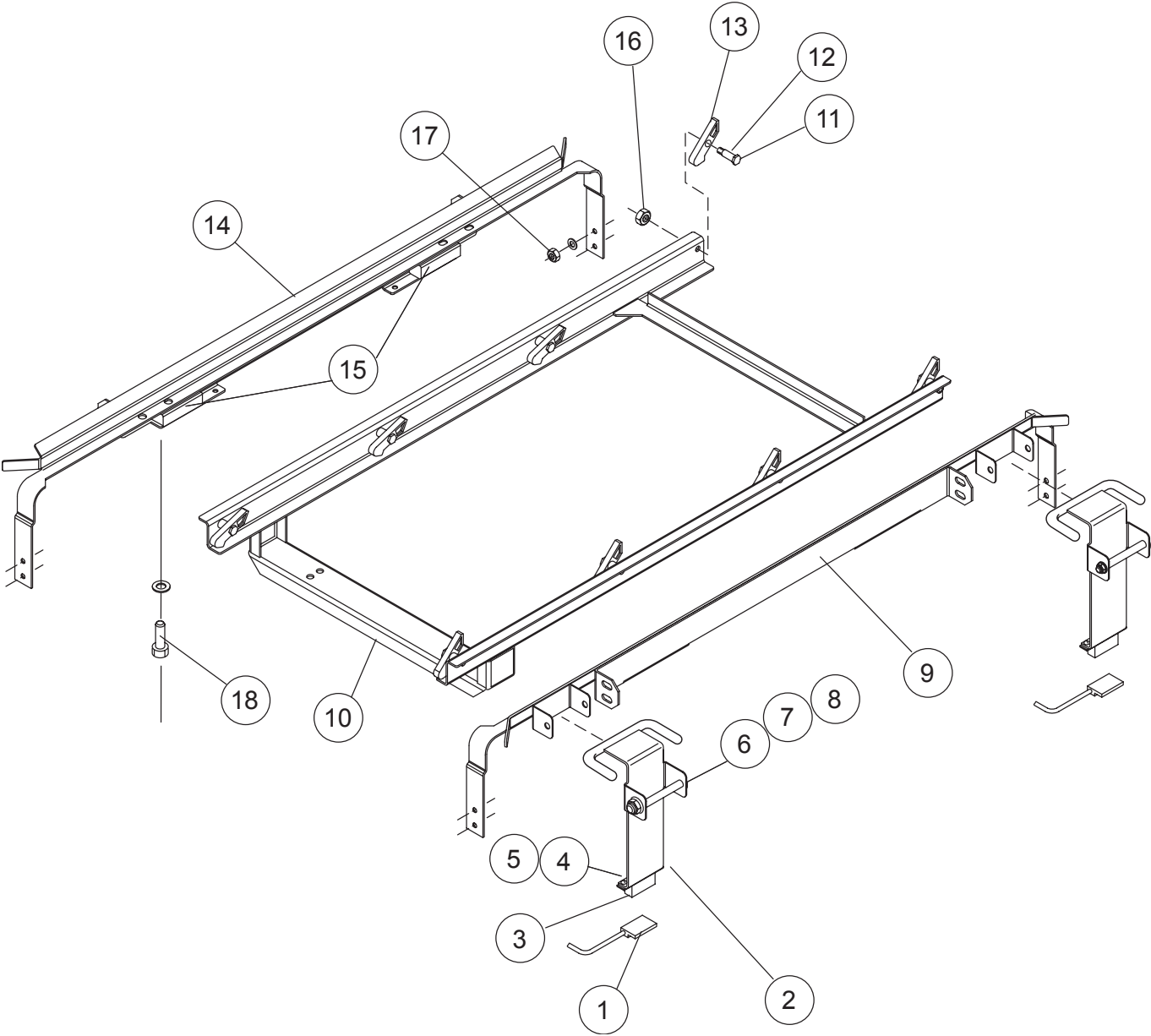


Item No.	Part No.	Description	Qty.
1	202381	Roller Crosshead	1
2	100868	Roller Stud Crosshead	1
3	107089	Nut Jam 1/2-13	1
4	206300	Crank, Rack Arm	1
5	206301	Shaft 5/8 Diameter 8-3/8 LG	1
6	206302	Housing, Bearing/Seal	1
7	102244	Seal 5/8"	1
8	206303	Gasket/Bearing Seal	1
9	100382	Bearing Jaf #EK104-10	1
10	100007	Screw, 10-32 x 3/8 Truss Head	1
11	104925	Washer 1/4 x 1 x 16 Gauge	1
12	103180	Wiper Ring	1
13	104916	Key 3/16 x 3/16 x 3/4 SST	1
14	100794	V-belt 4L 310	1
15	113892	Sheave AK 59-5/8 Bore	1
16	327924	Bracket, 44 Drive Bearing Mounting	1
17	113860	Bearing, Sealed 5/8 Bore	1
18	104923	Screw 1/4-20 x 3/8 Round Head	4
19	100153	Bolt 3/8-16 x 1 Hex Head	4
---	104618	Washer 3/8 x 7/8 x 1/16 SST	4
---	109010	Nut Grip 3/8 w/Nylon Insert	4
20	100739	Bolt 5/16-18 x 3/4 Hex Head SST	2
---	100154	Nut Plain 5/16-18	2
---	106013	Washer Lock 5/16 Split	2
---	109009	Nut Grip 5/16 w/Nylon Insert	2



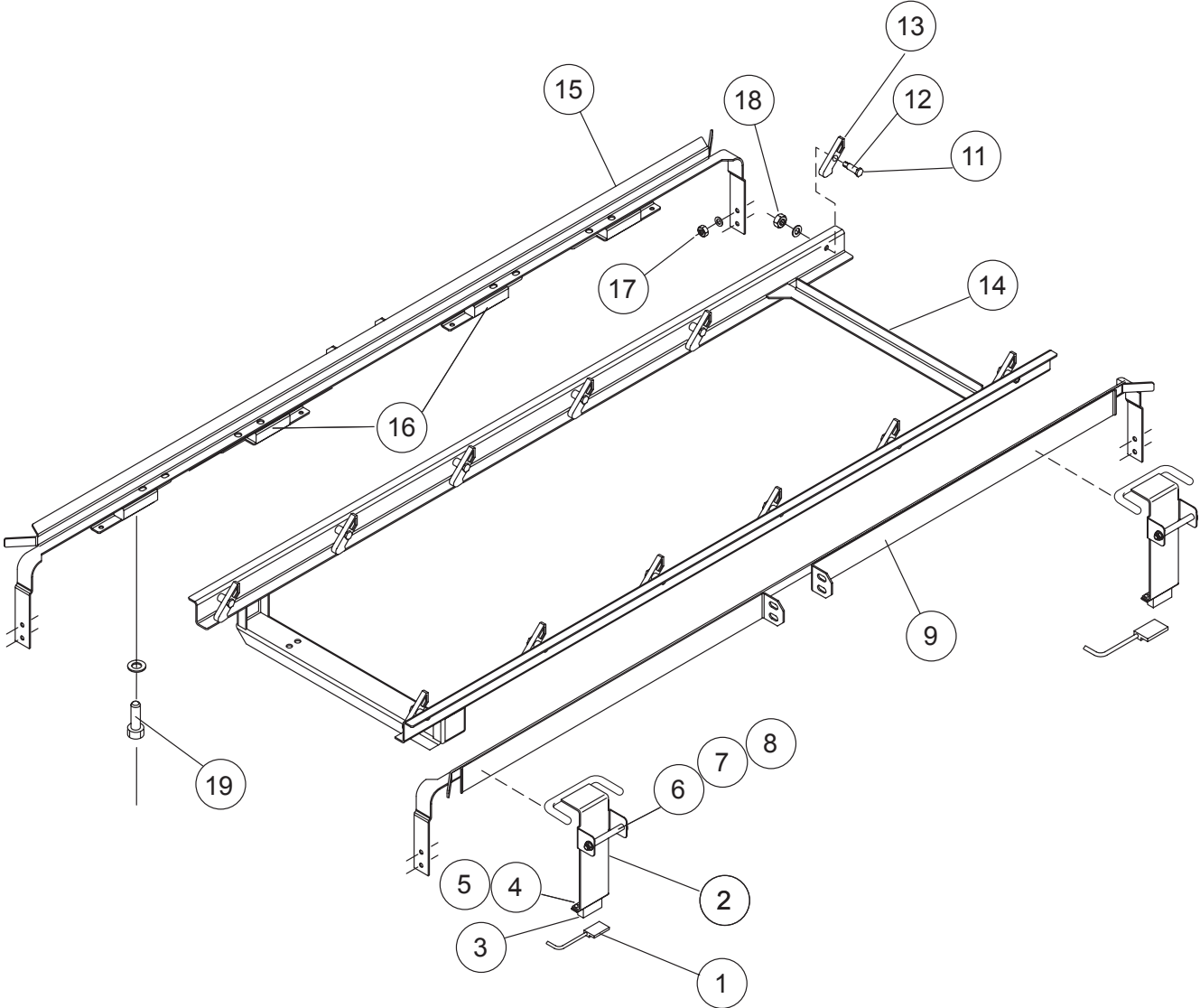


Item No.	Part No.	Description	Qty.
1	113719	Switch, Reed Aleph	1
2	328045	Switch, PW Idle	1
3	111026	Magnet, SS	1
4	100764	Screw, 6-32 x 1/2 Round Head SST	2
5	108954	Nut, Grip 6-32 Hex Head W/Nylon Insert	2
6	106482	Washer Lock 1/4 Split	2
7	327833	Pin Idle Pump Switch	1
8	100736	Screw, 1/4-20 x 3/4 Hex Head	2
9	328041	Track, 22" PW Rear	1
10	328043	Cradle, 22" PW	1
11	204513	Pawl, NG Cradle	4
12	206345	Bushing, Rack Cradle Pawl	4
13	113692	Screw, 3/8 x .875 x 5/15-18	4
14	328450	Bracket, Cradle bridge Single Tank, 22" PW	2
14	328613	Bracket, Cradle Bridge Two Tank 36" PW	2
15	206343	Bearing, Rack Cradle Slide	4
16	327955	Track, 22" PW Front	1
17	100736	Bolt 1/4-20 x 3/4 Hex Head SST	
18	112318	Washer	4
---	100141	Nut, Grip 1/4-20	4
19	100142	Nut, Grip 5/16-18	1
20	100736	Bolt 1/4-20 x 3/4 Hex Head SST	2
---	106482	Washer Lock 1/4-20 Split	2



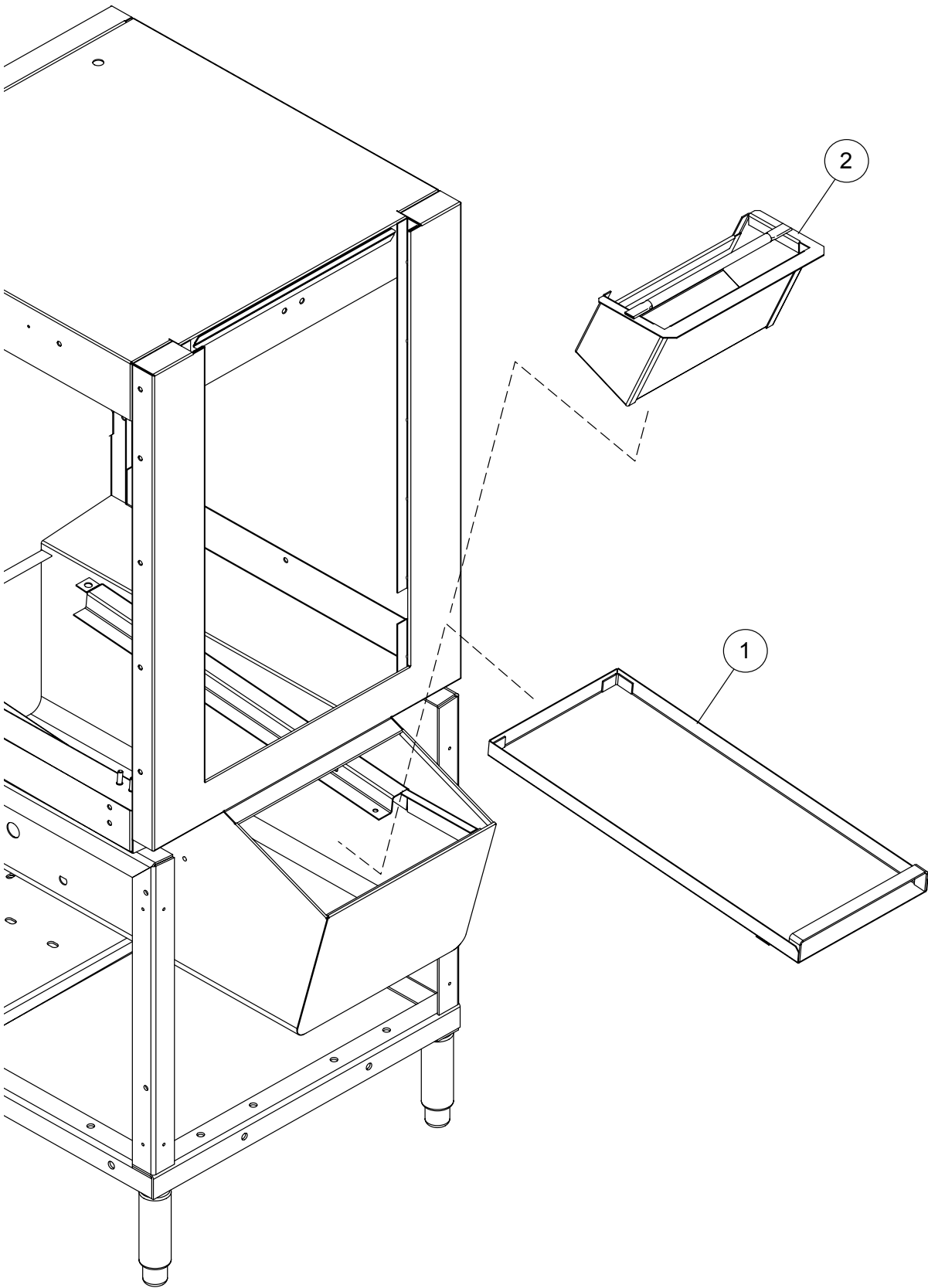
*Single Tank Track & Cradle Assembly • Replacement Parts*

Item No.	Part No.	Description	Qty.
1	113719	Switch, Reed Aleph	1
2	414344	Switch, Idle Assembly (Includes Items 3-8)	1
3	111026	Magnet, SS	1
4	100764	Screw, 6-32 x 1/2 Round Head SST	2
5	108954	Nut, Grip 6-32 Hex Head W/Nylon Insert	2
6	106482	Washer Lock 1/4 Split	2
7	327833	Pin Idle Pump Switch	1
8	100736	Screw, 1/4-20 x 3/4 Hex Head	2
9	414370	Track, E44 Front	1
10	414307	Cradle, E44	1
11	113692	Screw, 3/8 x .875 x 5/15-18	8
12	206345	Bushing, Rack Cradle Pawl	8
13	204513	Pawl, NG Cradle	8
14	414357	Track, E44 Rear	1
15	206343	Bearing, Rack Cradle Slide	4
16	100412	Nut, Grip 5/16-18	1
17	100141	Nut, Grip 1/4-20	4
---	112318	Screw 1/4-20 x 1/2	4
	100141	Nut, Grip 1/4-20	4
18	100736	Bolt 1/4-20 x 3/4 Hex Head SST	2
---	106482	Washer Lock 1/4-20 Split	2
---	414377	Cradle, E-44 Complete (Includes Items 10-13 and 16)	1

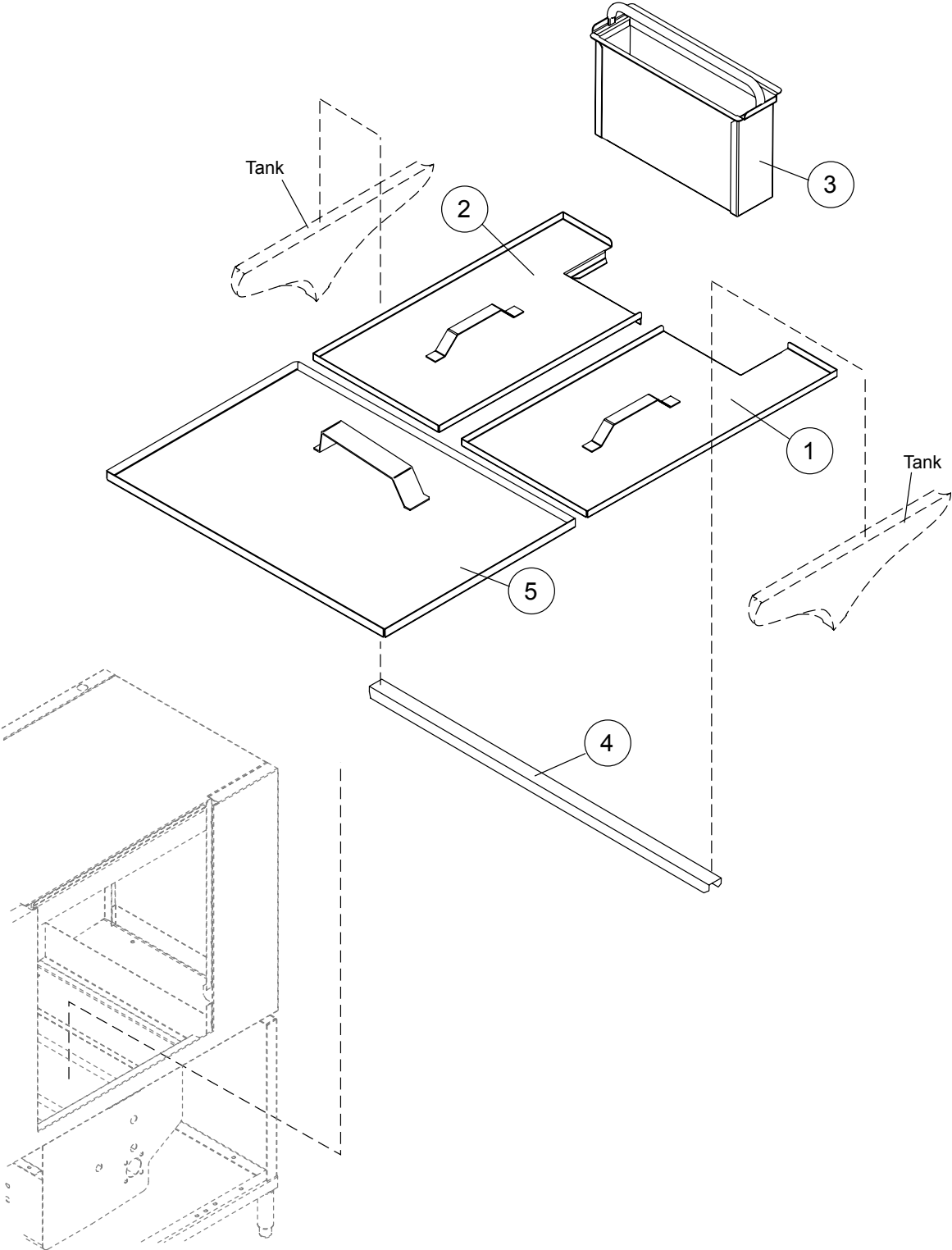


*Two Tank Track & Cradle Assembly • Replacement Parts*

Item No.	Part No.	Description	Qty.
1	113719	Switch, Reed Aleph	1
2	414344	Switch, Idle Assembly (Includes Items 3-8)	1
3	111026	Magnet, SS	1
4	100764	Screw, 6-32 x 1/2 Round Head SST	2
5	108954	Nut, Grip 6-32 Hex Head W/Nylon Insert	2
6	106482	Washer Lock 1/4 Split	2
7	327833	Pin Idle Pump Switch	1
8	100736	Screw, 1/4-20 x 3/4 Hex Head	2
9	414372	Track, 64 Front	1
10	414378	Cradle, 64 Assembly (Includes Items 11-14)	1
11	113692	Screw, 3/8 x .875 x 5/15-18	12
12	206345	Bushing, Rack Cradle Pawl	12
13	204513	Pawl, NG Cradle	12
14	414308	Cradle, 64	1
15	414358	Track, 64 Rear	1
16	206343	Bearing, Rack Cradle Slide	8
17	112318	Screw, 1/4-20 x 1/2	4
---	100141	Nut, Grip 1/4-20	4
18	100142	Nut, Grip 5/16-18	1
19	100736	Bolt 1/4-20 x 3/4 Hex Head SST	2
---	106482	Washer Lock 1/4-20 Split	2

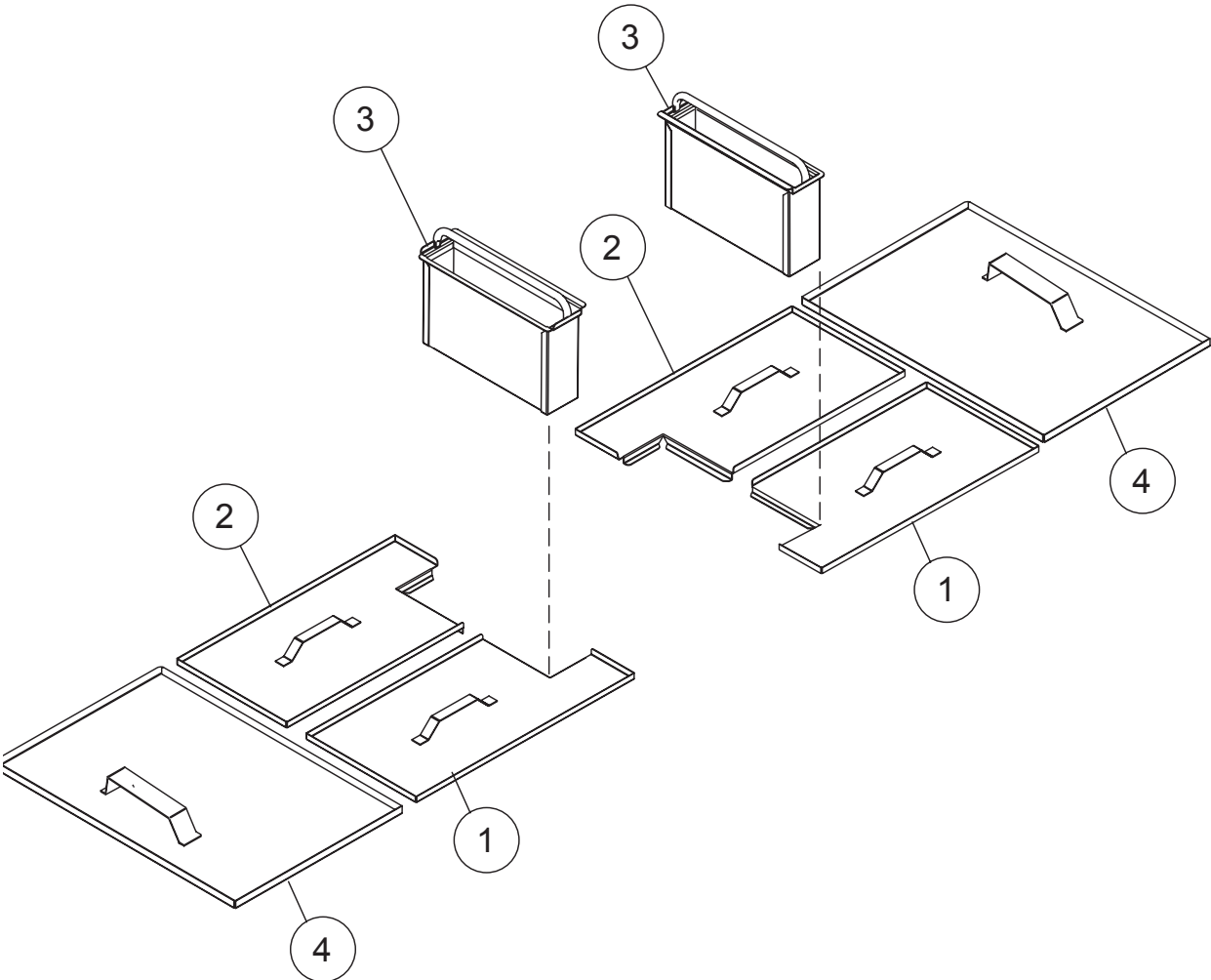


Item No.	Part No.	Description	Qty.
1	328958	Screen Assy	1
2	328959	Refuse Basket	1

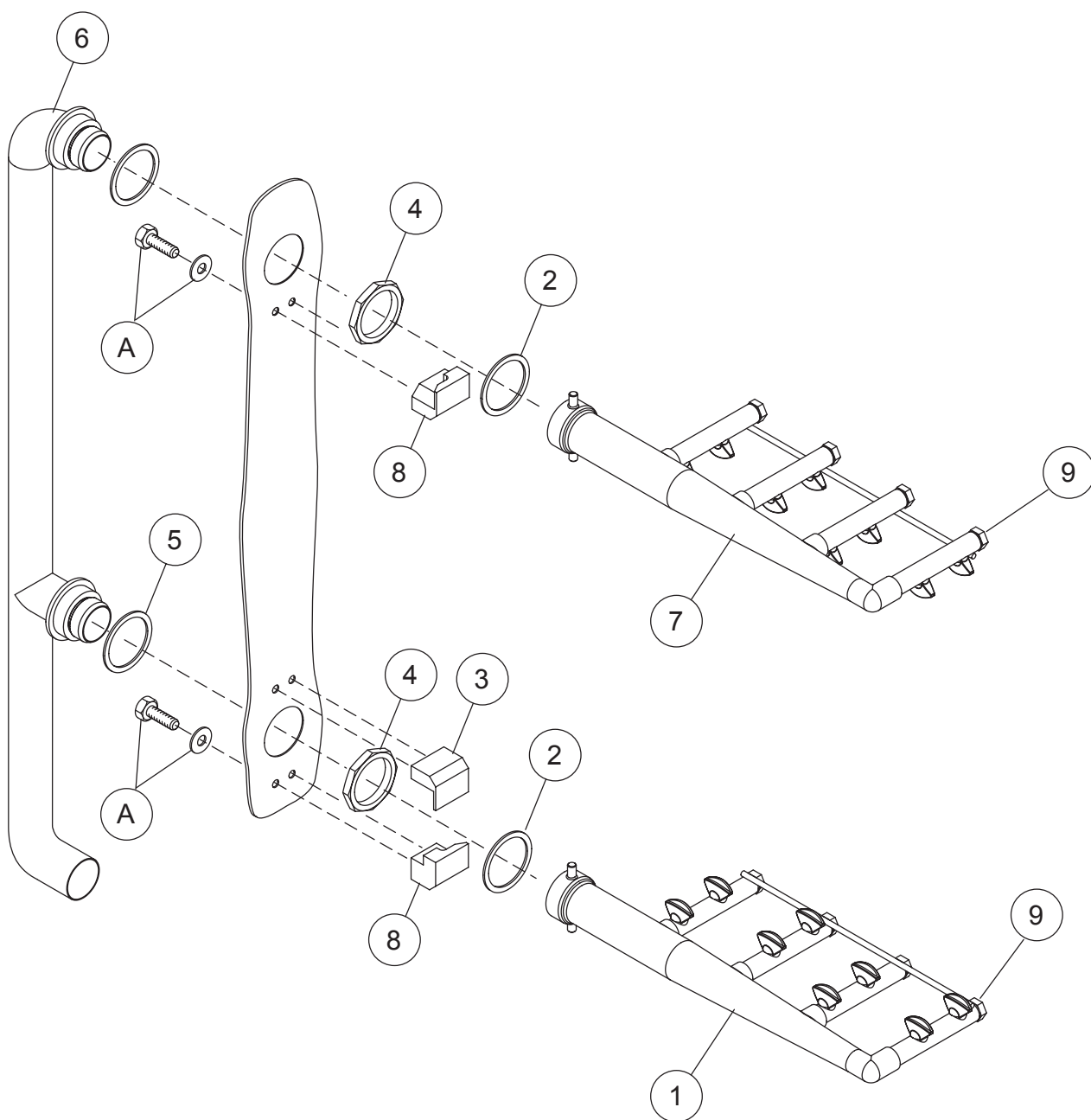




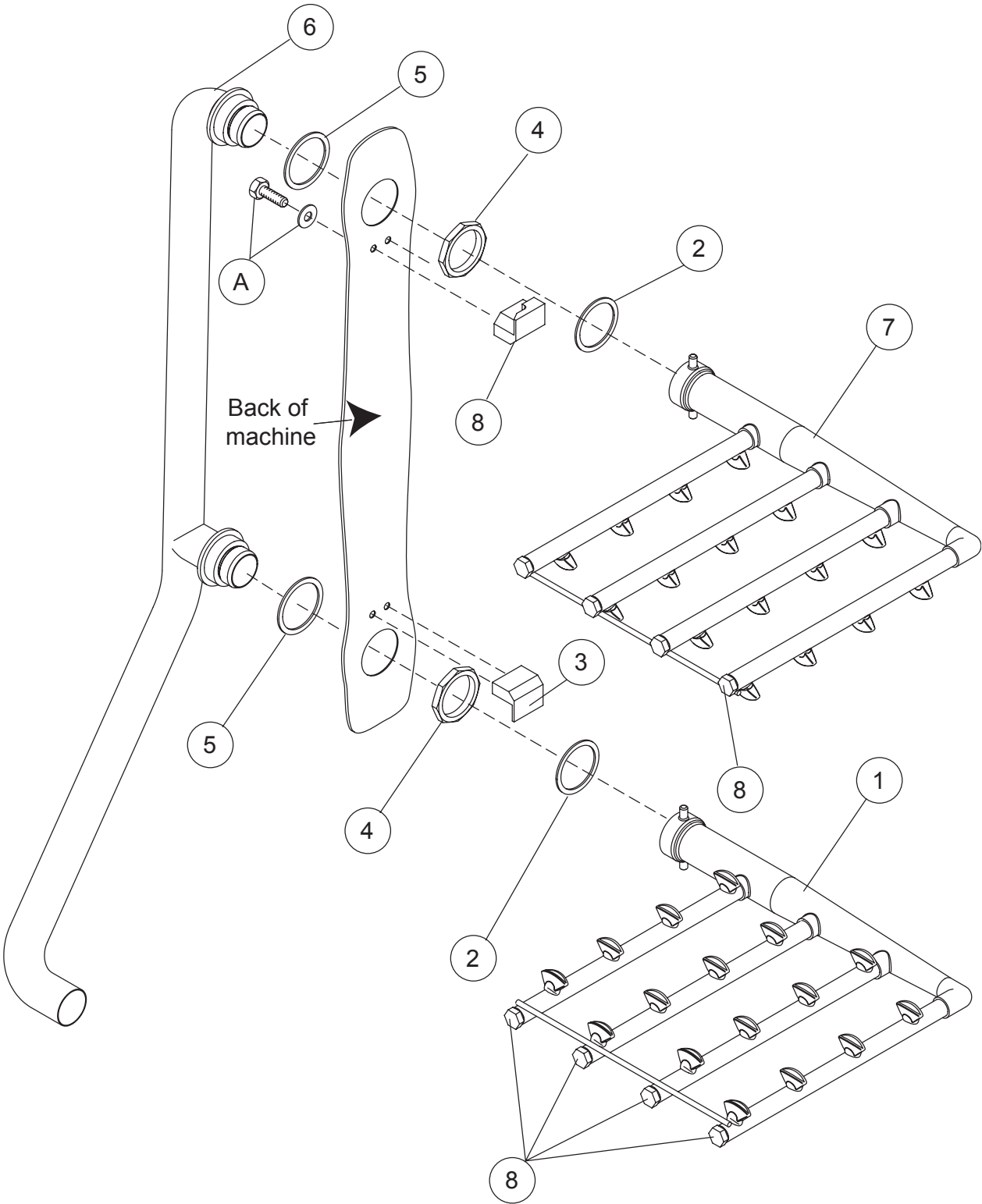
Item No.	Part No.	Description	Qty.
1	414328	Screen, E-44 L-R Front	1
2	414329	Screen, E-44 L-R Rear	1
3	414300	Basket, Rack	1
4	327888	Support, Screen	1
5	328653	Screen, Outboard, (E-54 Only)	1



Item No.	Part No.	Description	Qty.
1	414328	Screen, E-44 L-R Front	1
2	414329	Screen, E-S44 L-R Rear	1
3	414300	Basket, Rack	1
4	328653	Support, Screen (not shown)	2
5	327888	Screen, Outboard (E-64, E-84)	2

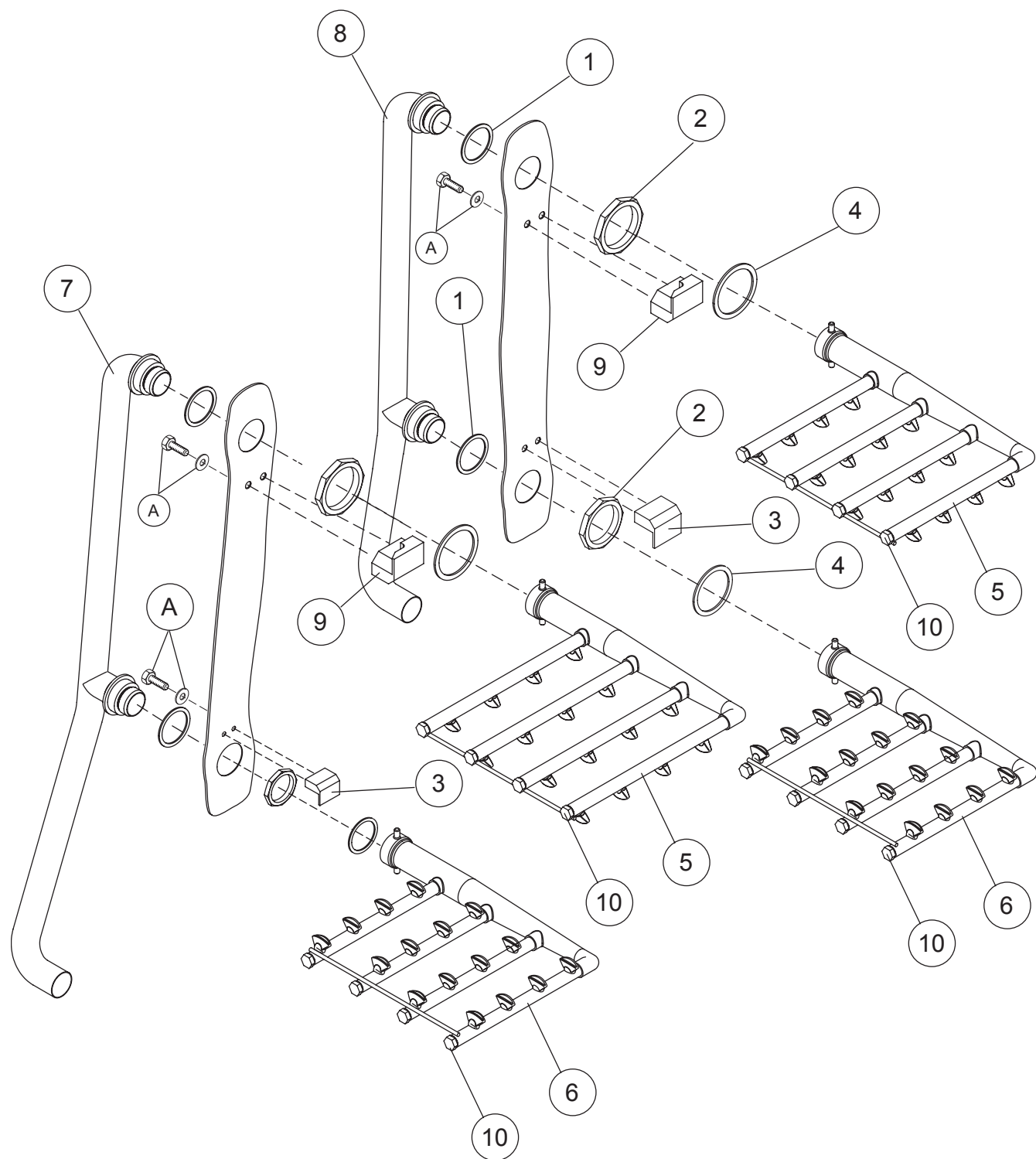


Item No.	Part No.	Description	Qty.
1	414293	Wash Manifold Assembly 6" Lower	1
2	113723	O-Ring, 1.75 ID	1
3	113738	Lock, CW Wash Pin	4
4	113540	Locknut 2NPT SST	2
5	113542	Gasket, Flat EDPM 2-3/8 ID	2
6	328028	Standpipe, 22" PW	1
7	414292	Wash Manifold Assy 6" Upper	1
8	113738	Guide Block	1
9	113555	Plug, Wash Arm E-Series (qty per arm)	4
<b>A</b>		<b>Wash Arm Lock Fasteners (Qty per Arm)</b>	
	107073	Stud Weld 1/4-20 x 1"	4
	0501501	Lock Washer 1/4"	4
	106026	Washer 1/4" x 5/8" x 1/16" SST	4
	106014	Nut Acorn 1/4-20	4



Item No.	Part No.	Description	Qty.
1	414291	Wash Manifold Assembly 10" 15° Lower (L-R)	1
1	414290	Wash Manifold Assembly 10" 15° Lower (R-L)	1
2	113723	O-ring, 1.75 ID	2
3	113738	Lock, Spray arm pin	1
4	113540	Locknut 2NPT SST	2
5	113542	Gasket, Flat EDPM 2-3/8 ID	2
6	414317	Standpipe, L-R 44	1
6	327993	Standpipe, R-L 44	1
7	414289	Wash Manifold Assy 14" Straight Upper (L-R)	1
7	414288	Wash Manifold Assy 14" Straight Upper (R-L)	1
8	113738	Lock, Spray arm pin	1
9	113555	Plug, Wash Arm E-Series (qty per arm)	4
<b>A</b>		<b>Wash Arm Lock Fasteners (Qty per Arm)</b>	
	107073	Stud Weld 1/4-20 x 1"	4
	0501501	Lock Washer 1/4"	4
	106026	Washer 1/4" x 5/8" x 1/16" SST	4
	106014	Nut Acorn 1/4-20	4

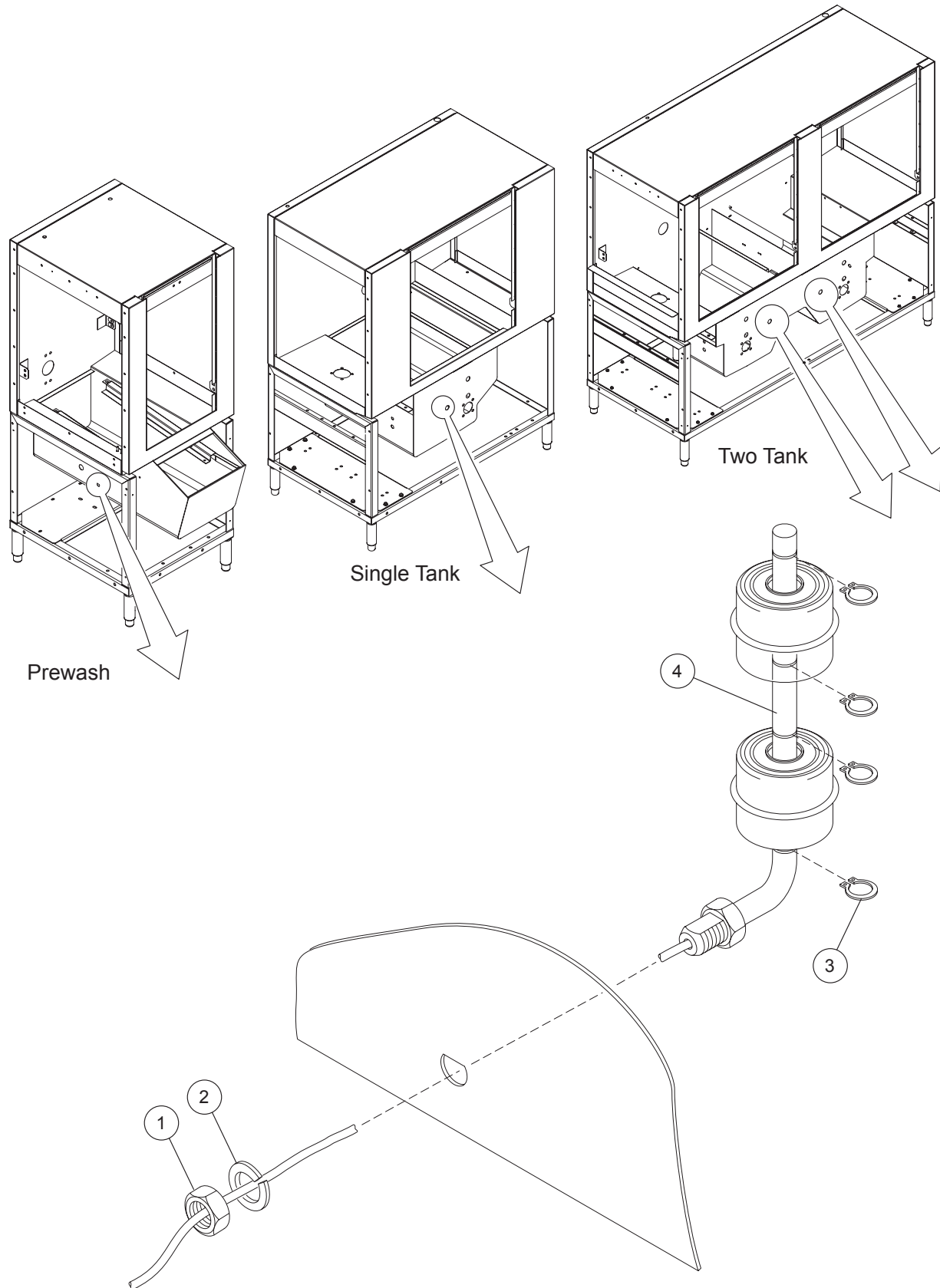
Replacement Parts • Two Tank Wash & Rinse Spray Arms



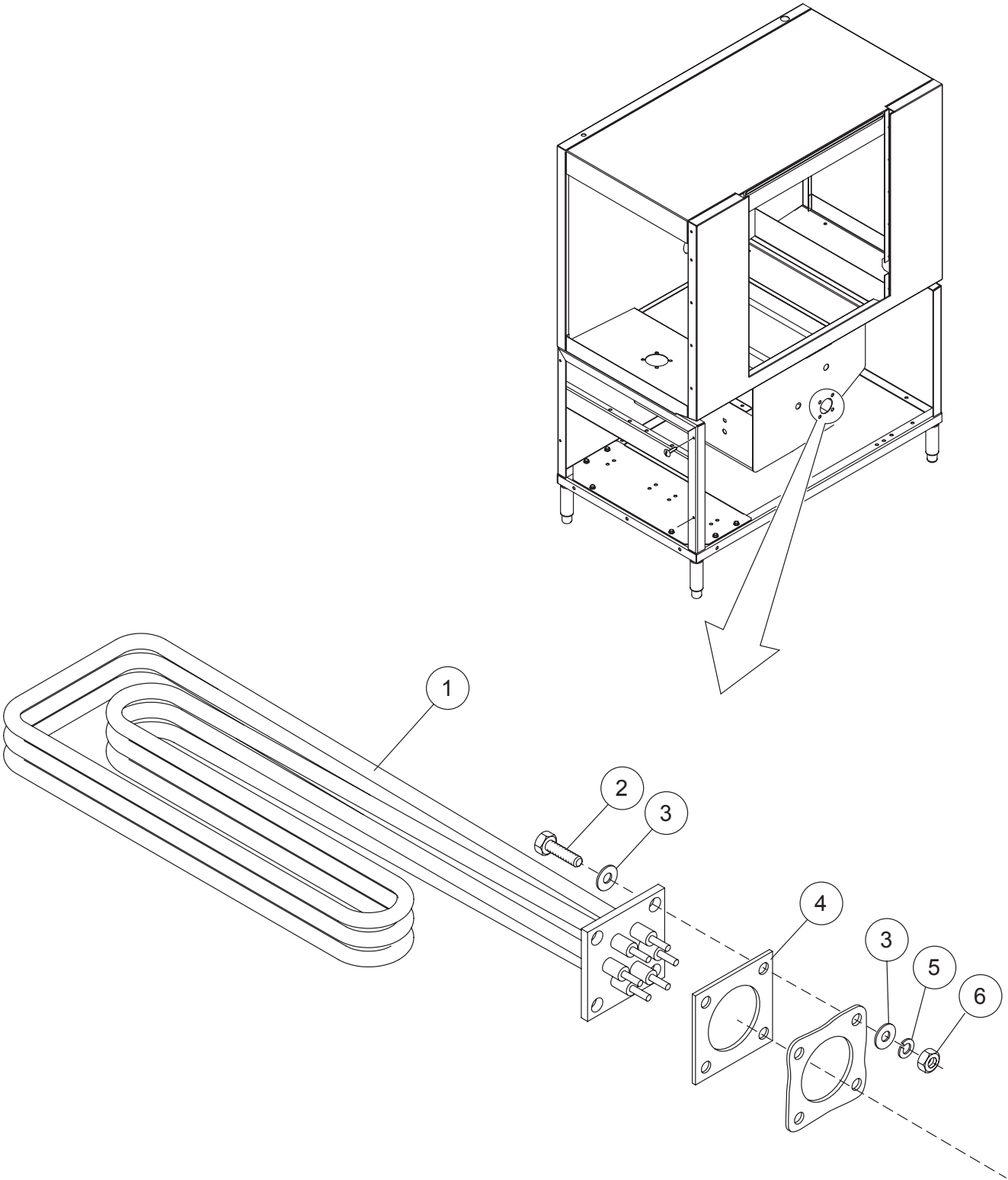


*Two Tank Wash & Rinse Spray Arms • Replacement Parts*

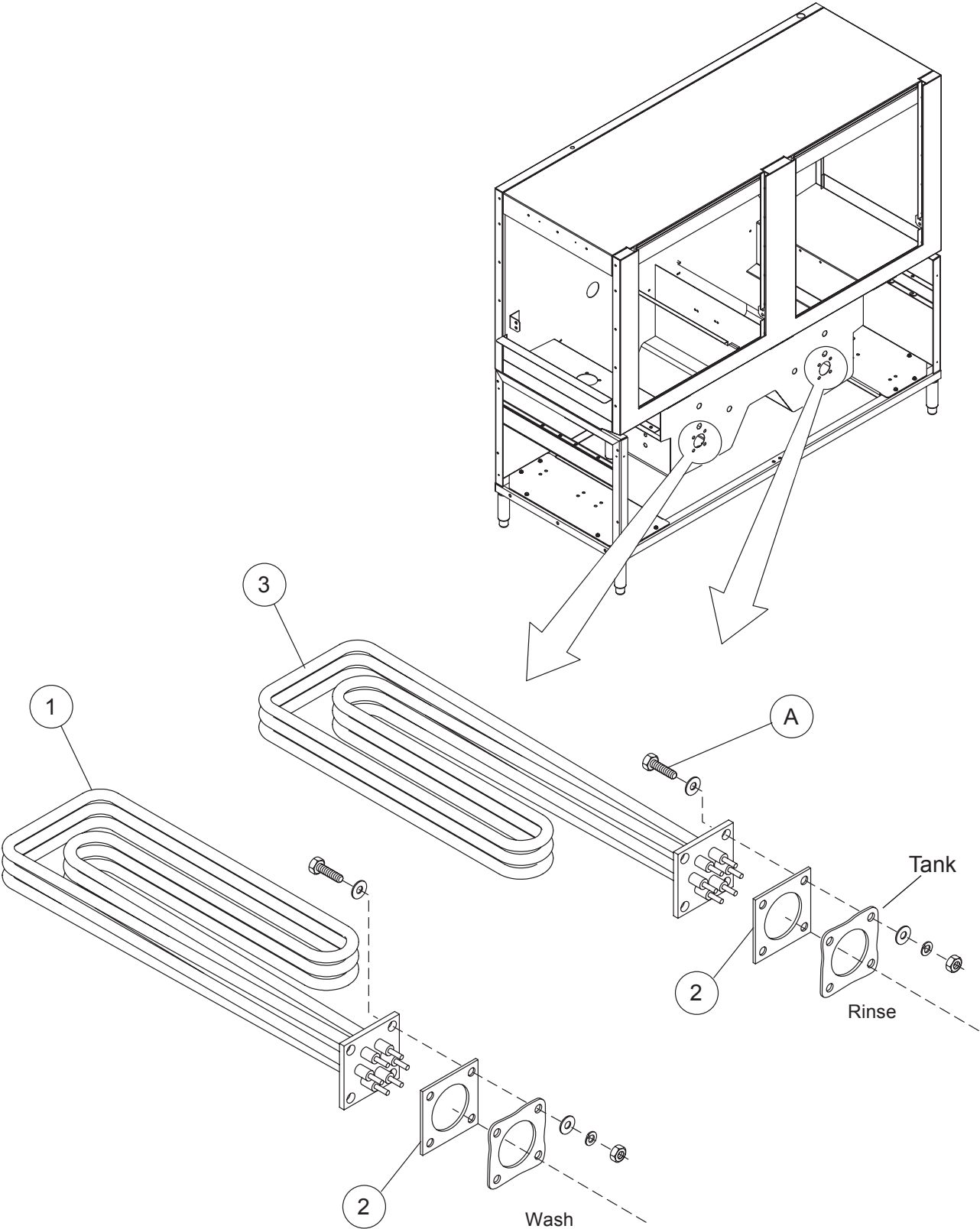
Item No.	Part No.	Description	Qty.
1	113542	Gasket, Flat EDPM 2-3/8 ID	4
2	113540	Locknut 2NPT SST	4
3	113738	Lock, Pin spray arm	2
4	113723	O-ring, 1.75 ID	2
5	414289	Wash Manifold Assembly 14" Straight Upper (L-R)	2
5	414288	Wash Manifold Assembly 14" Straight Upper (R-L)	2
6	414291	Wash Manifold Assembly 10" 15° Lower (L-R)	2
6	414290	Wash Manifold Assembly 10" 15° Lower (R-L)	2
7	414318	Standpipe 64 L-R Wash	1
7	328443	Standpipe 64 R-L Wash	1
8	414319	Standpipe 64 L-R Rinse	1
	328445	Standpipe 64 R-L Rinse	1
9	113738	Lock, Pin spray arm	2
10	113555	Plug, Wash Arm E-Series (qty per arm)	4
<b>A</b>		<b>Wash Arm Lock Fasteners (Qty per Arm)</b>	
	107073	Stud Weld 1/4-20 x 1"	4
	0501501	Lock Washer 1/4"	4
	106026	Washer 1/4" x 5/8" x 1/16" SST	4
	106014	Nut Acorn 1/4-20	4



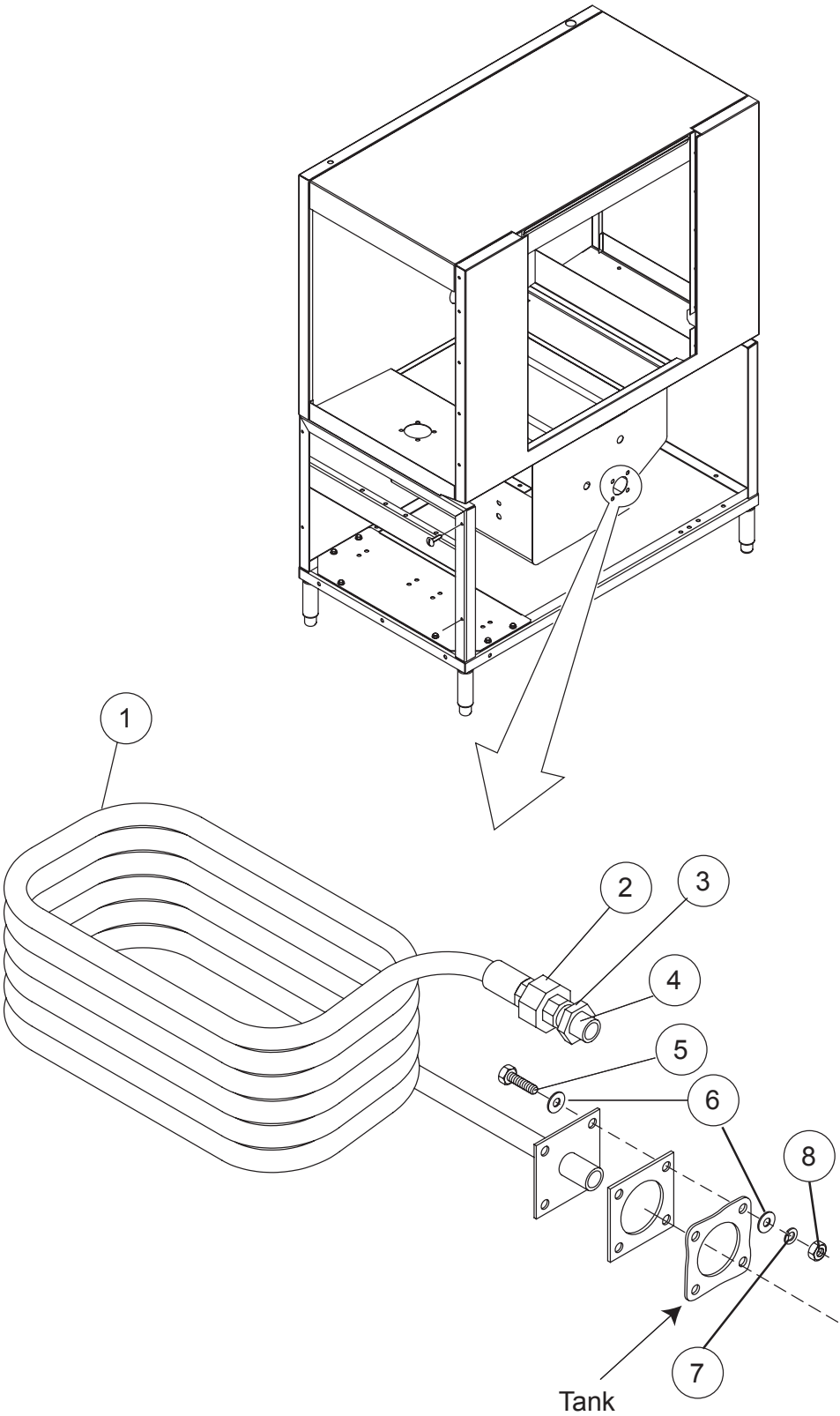
Item No.	Part No.	Description	Qty.
1	104584	Nut, Plain 1/2-13	1
2	107589	Washer, Flat 1/2"	1
3	111151	C-Clip	A/R
4	110854	Float Switch, Dual Prewash	1
--	113291	Float Switch, Dual Wash/Rinse E-44	1
--	113291	Float Switch, Dual Wash/Rinse E-64	2
--	110750	Gasket, Float Switch (Not Shown)	A/R



Item No.	Part No.	Description	Qty.
1	113516	Heater 15/18KW 208V,380V	1
	113517	Heater 15/16.3KW 230/240V, 400/415V	1
	113518	Heater 15/16.3KW 460/480V	1
	113519	Heater 15KW 575V	1
2	100153	Bolt, 3/18-16 x 1 Hex Head	4
3	104618	Washer 3/8 x 7/8 x 1/16 SST	8
4	108345	Gasket 3 x 3 x 1/8" 2" Hole	1
5	106407	Washer Lock 3/8 Split	4
6	100140	Nut Plain 3/8-16	4

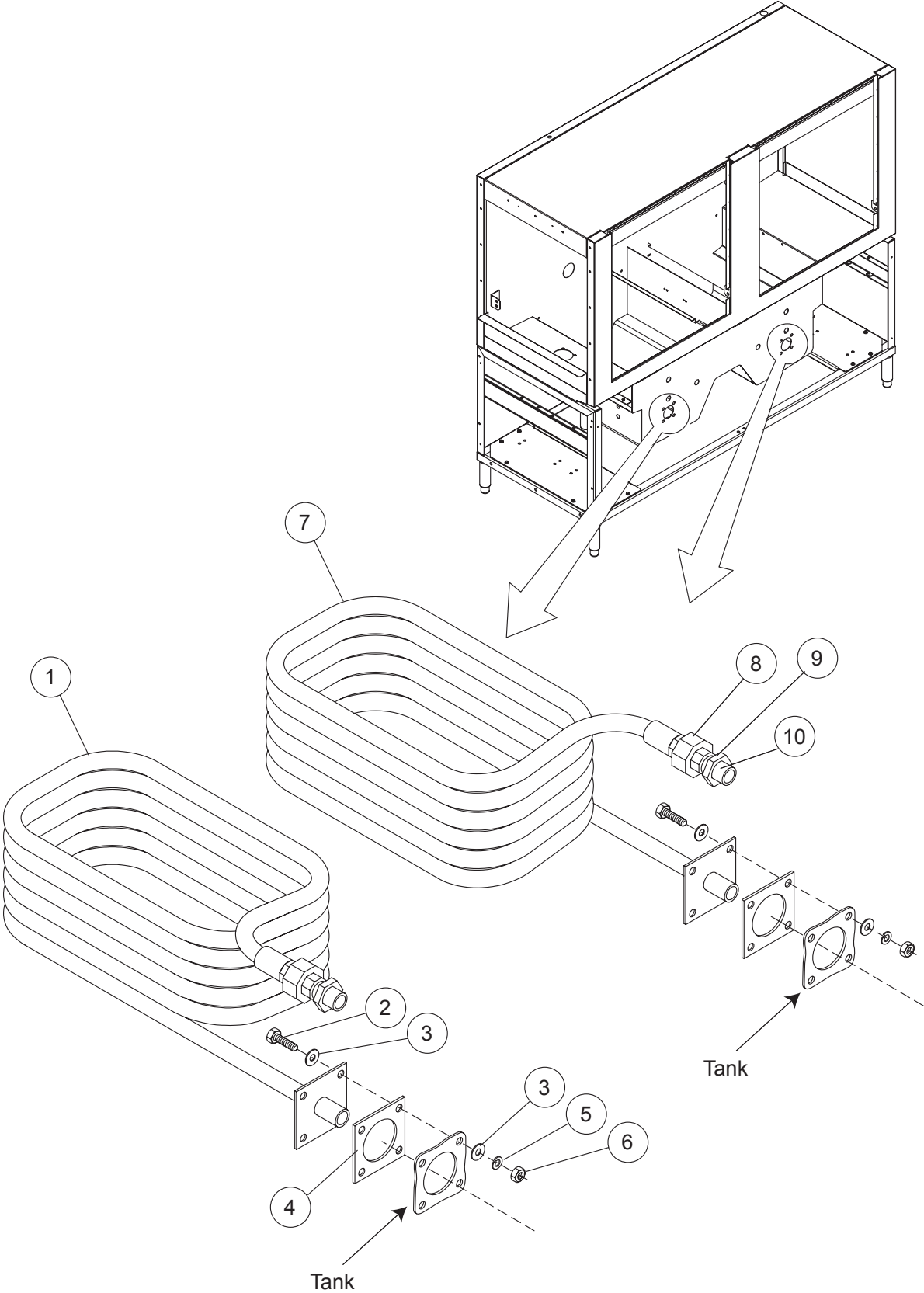


Item No.	Part No.	Description	Qty.
1	113516	Heater 15/18KW 200/220V (Wash)	1
	113517	Heater 15/16.3KW 230/240V(Wash)	1
	113518	Heater 15/16.3KW 460/480V (Wash)	1
	113519	Heater 15KW 575V (Wash)	1
2	108345	Gasket 3 x 3 x 1/8" 2" Hole	1
3	113804	Heater 10/12.1 KW 200/220V (Rinse)	1
	118842	Heater 10/11KW 230/240V (Rinse)	1
	113883	Heater 10/11KW 460/480V (Rinse)	1
	113884	Heater 10/11KW 575V (Rinse)	1
<b>A</b>		<b>Element Fasteners (Qty Per Element)</b>	
	100153	Bolt, 3/18-16 x 1 Hex Head	4
	104618	Washer 3/8 x 7/8 x 1/16 SST	8
	106407	Washer Lock 3/8 Split	4
	100140	Nut Plain 3/8-16	4

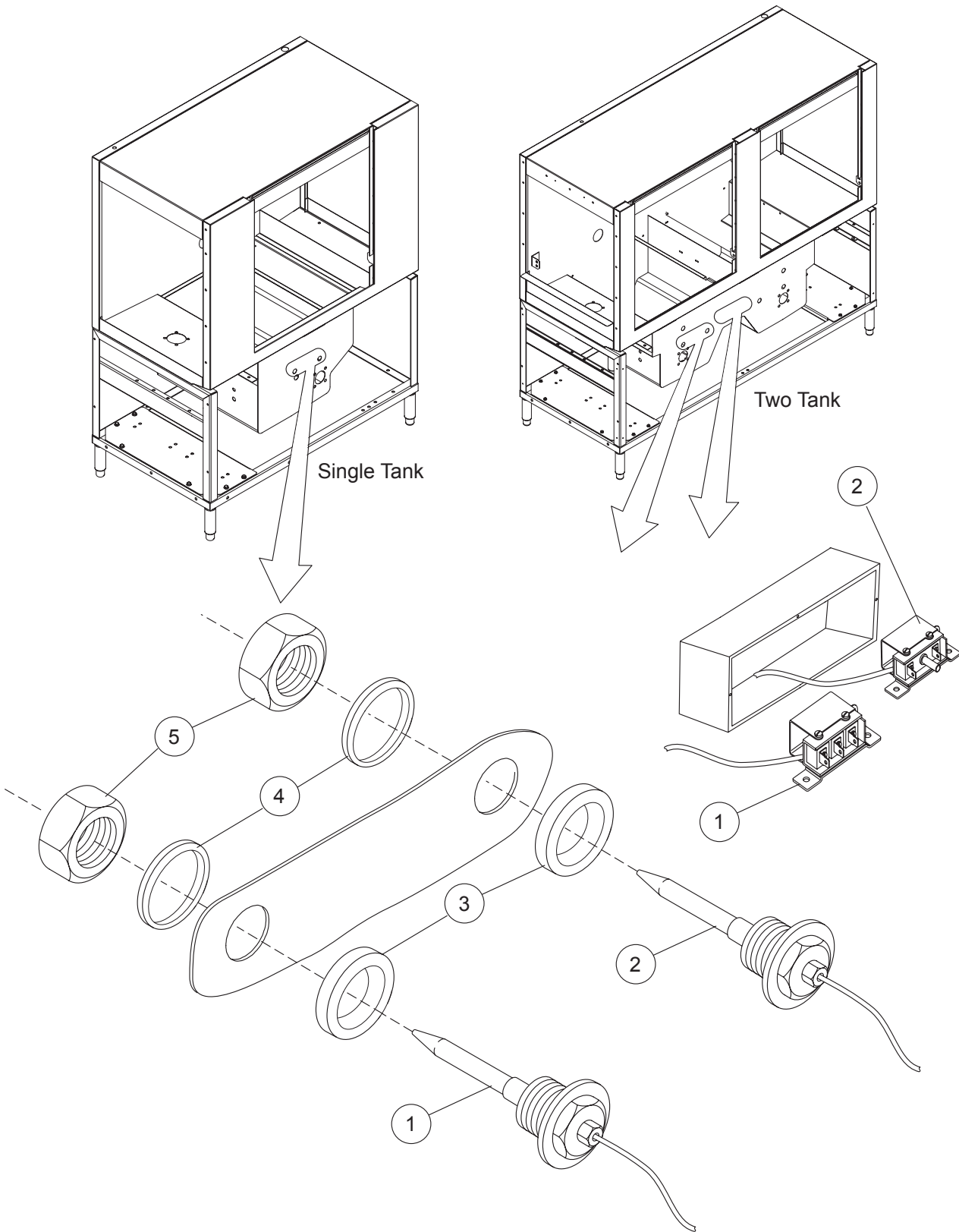




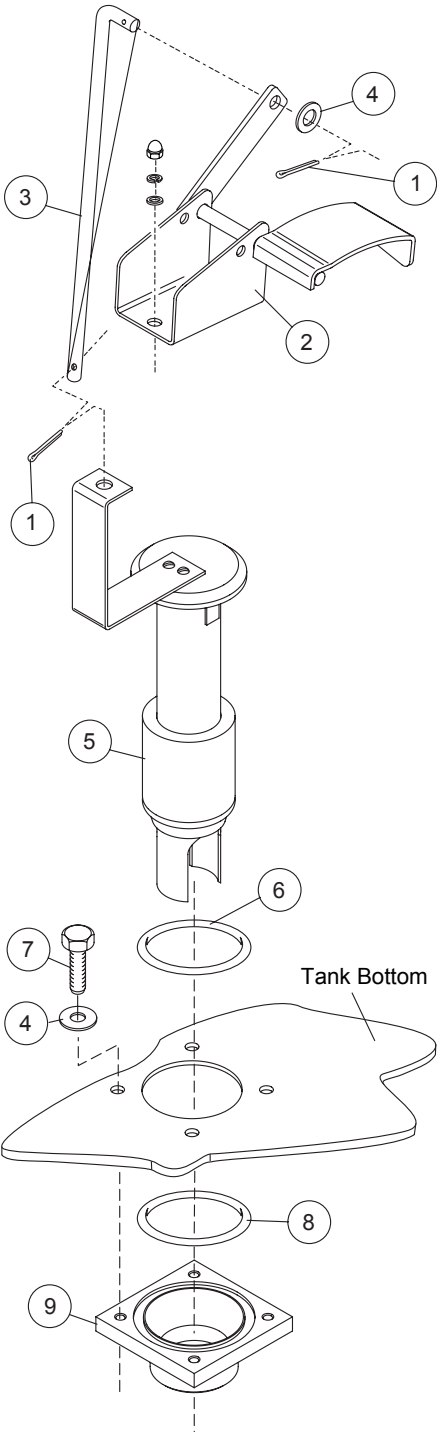
Item No.	Part No.	Description	Qty.
1	327908	Coil, Steam RH (Shown)	1
1	327907	Coil, Steam LH	1
2	102554	Union 3/4 SST	1
3	100548	Locknut, 3/4NPT SST	1
4	113918	Nipple, Rtoe 3/4 x 1-3/4	1
5	100740	Bolt 5/16-18 x 1 Hex Head	4
6	102376	Washer 5/16 X 3/4 x 1/16	8
7	108345	Gasket 3 x 3 1/8" 2IN Hole	1
8	106013	Washer Lock 5/16 Split	4
9	100154	Nut Plain 5/16-18	4



Item No.	Part No.	Description	Qty.
1	327907	Coil, Steam LH	1
2	100740	Bolt 5/16-18 x 1 Hex Head	8
3	102376	Washer 5/16 X 3/4 x 1/16	16
4	108345	Gasket 3 x 3 1/8" 2IN Hole	2
5	106013	Washer Lock 5/16 Split	8
6	100154	Nut Plain 5/16-18	8
7	327908	Coil, Steam RH	1
8	102554	Union 3/4 SST	2
9	100548	Locknut, 3/4NPT SST	2
10	113918	Nipple, Rtoe 3/4 x 1-3/4	2

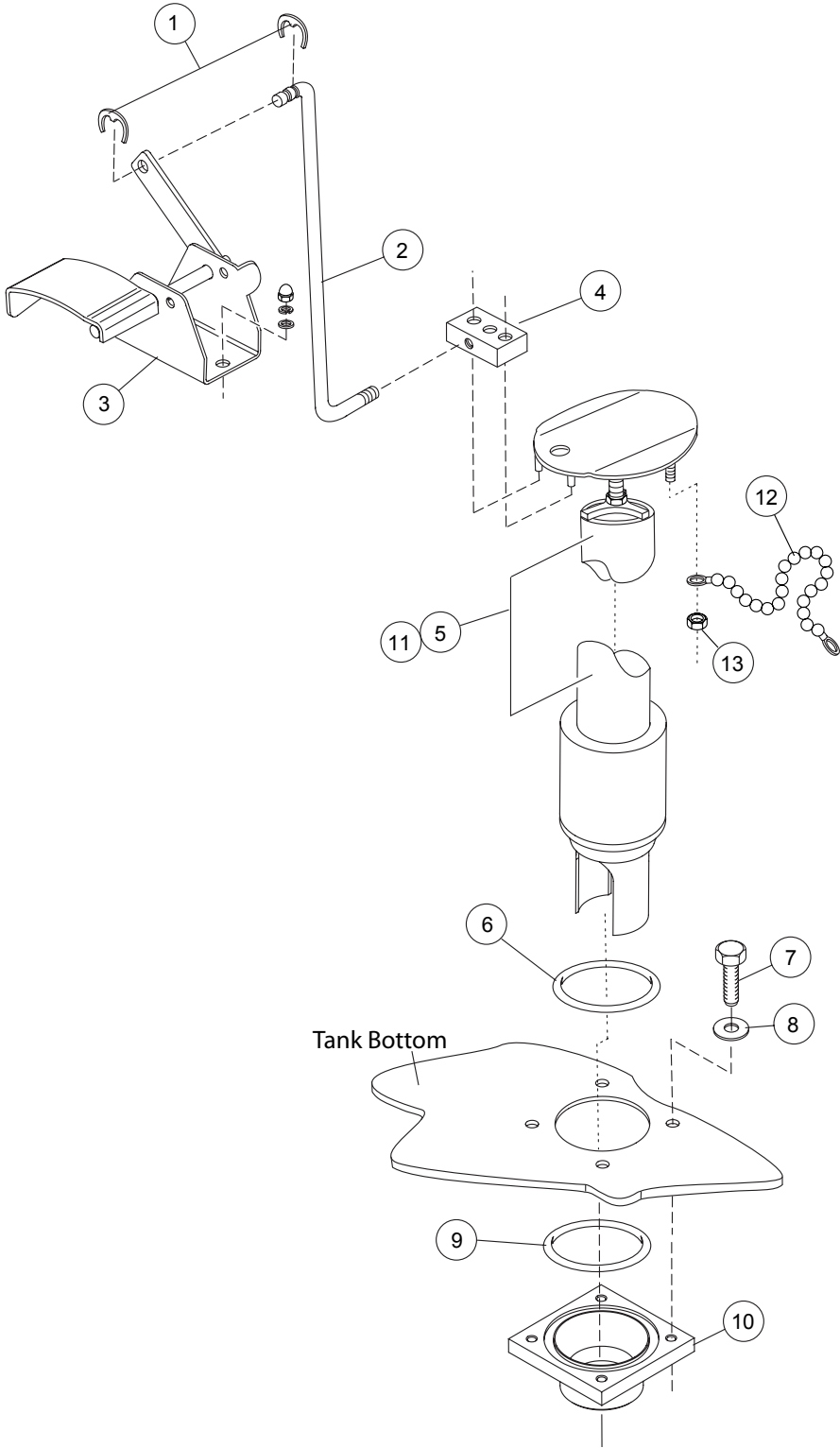


Item No.	Part No.	Description	Qty.
1	109069	Thermostat w/capillary - Single Tank	1
--	109069	Thermostat w/capillary -Two Tank	2
2	113200	Thermostat, Fixed Hi Limit - Single Tank	1
--	113200	Thermostat, Fixed Hi Limit -Two Tank	2
3	201041	Washer 7/8 ID x 1/8 Thk - Single Tank	2
--	201041	Washer 7/8 ID x 1/8 Thk - Two Tank	4
4	109034	Gasket. Plug - Single Tank	2
--	109034	Gasket. Plug - Two Tank	4
5	100547	Locknut 1-1/2 NPT SST - Single Tank	2
	100547	Locknut 1-1/2 NPT SST - Two Tank	4



Item No.	Part No.	Description	Qty.
1	108875	Cotter Pin 3/32 x 1/2 Uneven	2
2	328824	Lever Drain Lift	1
3	206419	Rod, Overflow Lift 22"PW	1
4	106026	Washer 1/4 x 5/8 x 1/6 SST	5
5	328430	Overflow PW Mtd	1
6	111532	O-ring, Overflow	1
7	100735	Bolt 1/4-20 x 5/8 Hex Head	4
8	112257	O-ring, drain	1
9	113559	Drain , Flange Cast/Mach SST	1

Replacement Parts • Single & Two Tank Drain-overflow Assembly

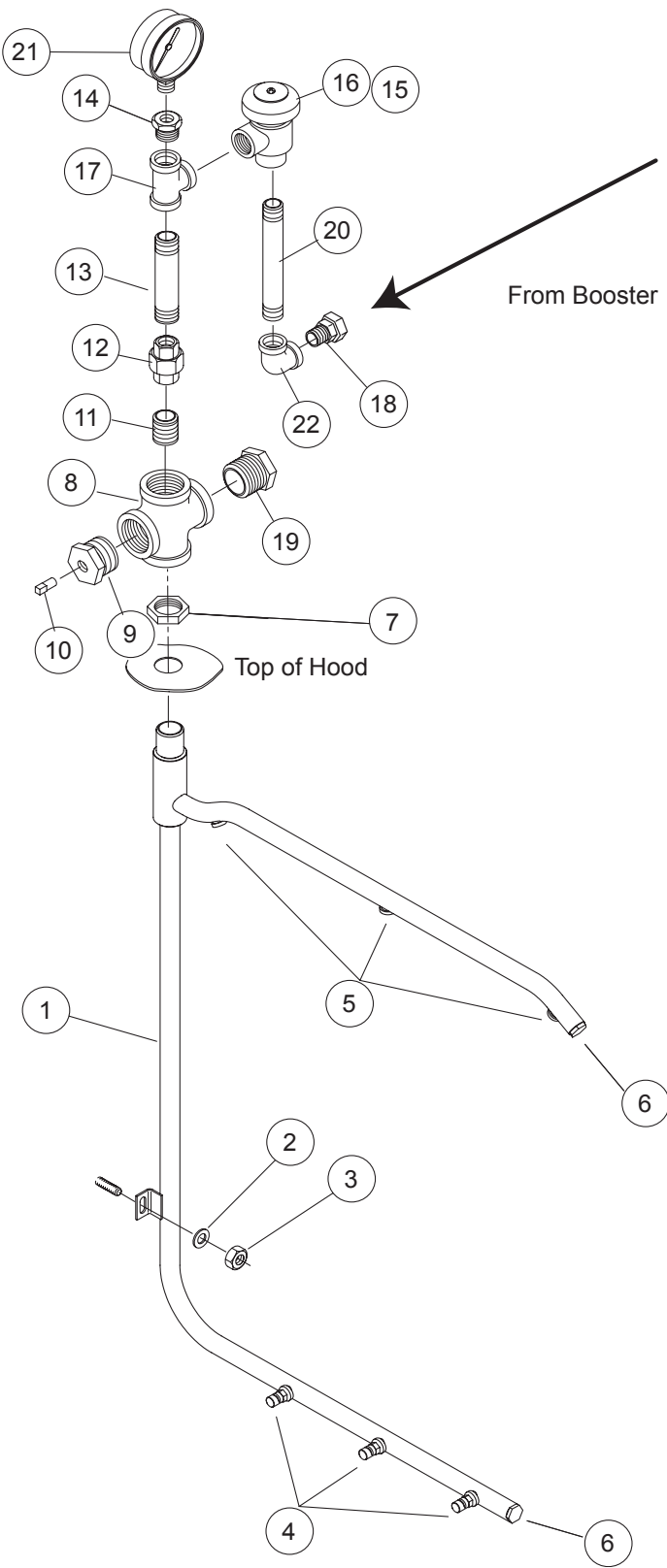




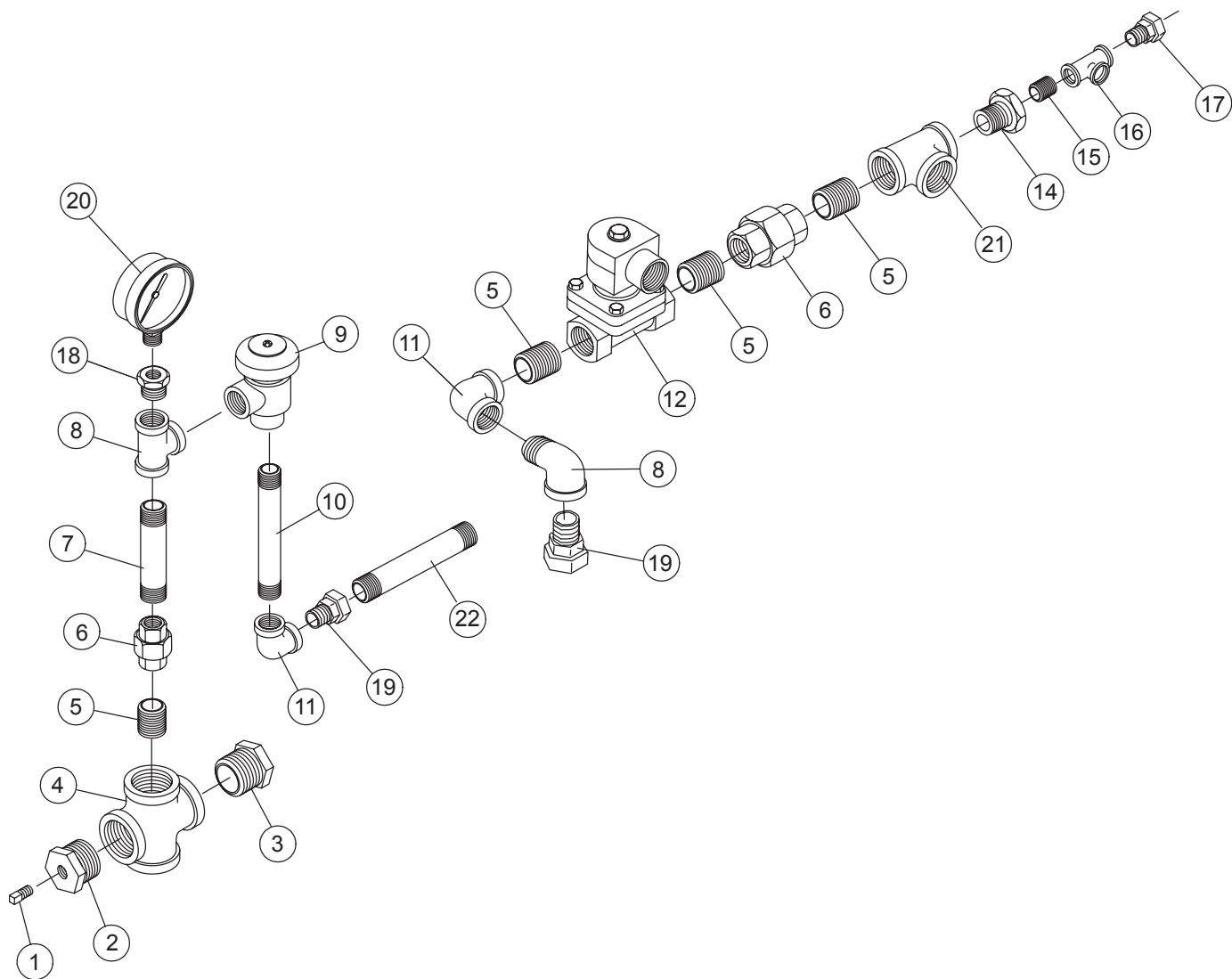
*Single & Two Tank Drain-overflow Assembly • Replacement Parts*

Item No.	Part No.	Description	Qty.
1	113715	Cotter Pin 3/32 x 1/2	2
2	328611	Lever Drain Lift	1
3	206442	Rod, Overflow Lift	1
4	206444	Block, drain lift	1
5	107966	Nut, Grip 10-32 w/Nylon Insert	2
6	112257	O-ring	1
7	100735	Bolt 1/4-20 x 5/8 Hex Head	4
8	106026	Washer 1/4 x 5/8 x 1/6 SST	5
9	111532	O-ring, Drain 1.600 ID x .21	1
10	113559	Drain , Flange Cast/Mach SST	1
11	414343	Overflow 2-tank Rinse Tank	1
12	017367	Chain, Bead ( 2-tank)	1 FT
13	104985	Nut, 10-32 ( 2-tank)	1

Replacement Parts • Final Rinse Piping with Booster



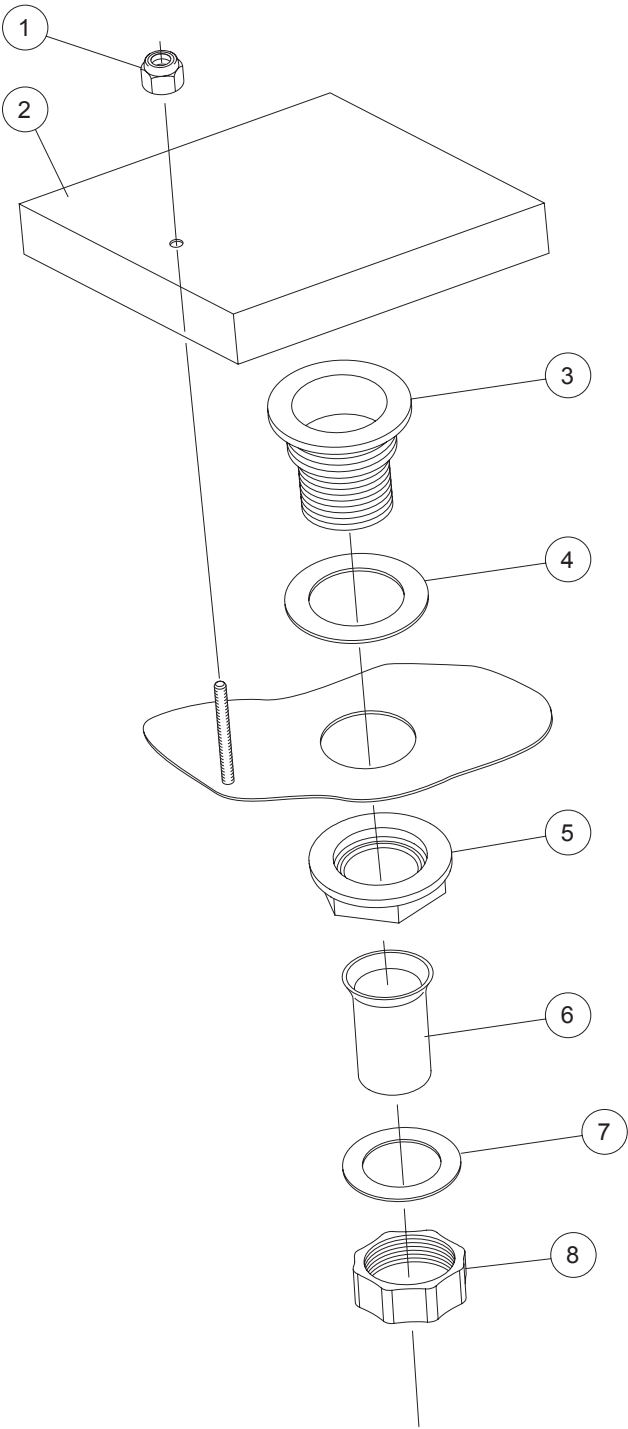
Item No.	Part No.	Description	Qty.
1	113694	Manifold 44/64 L-R Final Rinse	1
2	106026	Washer 1/4 x 5/8 x 1/16 SST	1
3	107967	Nut Grip 1/4-20 w/Nylon Insert	1
4	112022	Nozzle, Spray K-2 2T Rack	3
4	107290	Nozzle 1/8 HU-SS 8015 (44WS)	3
5	113709	Nozzle, Spray 8015 SST	3
5	0508376	Nozzle Rinse SST Upper (WS only)	3
6	113795	Plug 11/16-16 Thread	2
--	108620	Gasket Rinse Pipe (Not Shown)	1
7	100156	Locknut 3/4NPT Brass	1
8	100599	Cross 3/4" NPT Brass	1
9	105976	Bushing Red 3/4" NPT x 1/8" NPT Brass	1
10	101259	Plug 1/8" NPT Brass	1
11	100184	Nipple 3/4"NPT Close Brass	1
12	100571	Union 3/4"NPT Brass	1
13	102470	Nipple 3/4" NPT x 3" Lg Brass	1
14	102388	Bushing, Reducing 1/2"NPT x 1/4"NPT Brass	1
15	104429	Vacuum Breaker 3/4"NPT	1
16	900837	Kit*Repair, 3/4 Vacuum Breaker	A/R
17	102525	Tee, Red 3/4" x 1/2" x 3/4" NPT Brass	1
18	109879	Fitting Compression 3/4"NPT x 7/8" OD	1
19	100171	Bushing Red Face 3/4" NPT x 1/2 NPT Brass	1
20	102490	Nipple 1/4"NPT x 3-1/2" Lg Brass	1
21	100135	Pressure Gauge 0-60 PSI	1
22	102442	Elbow 3/4 x90° Brass	1



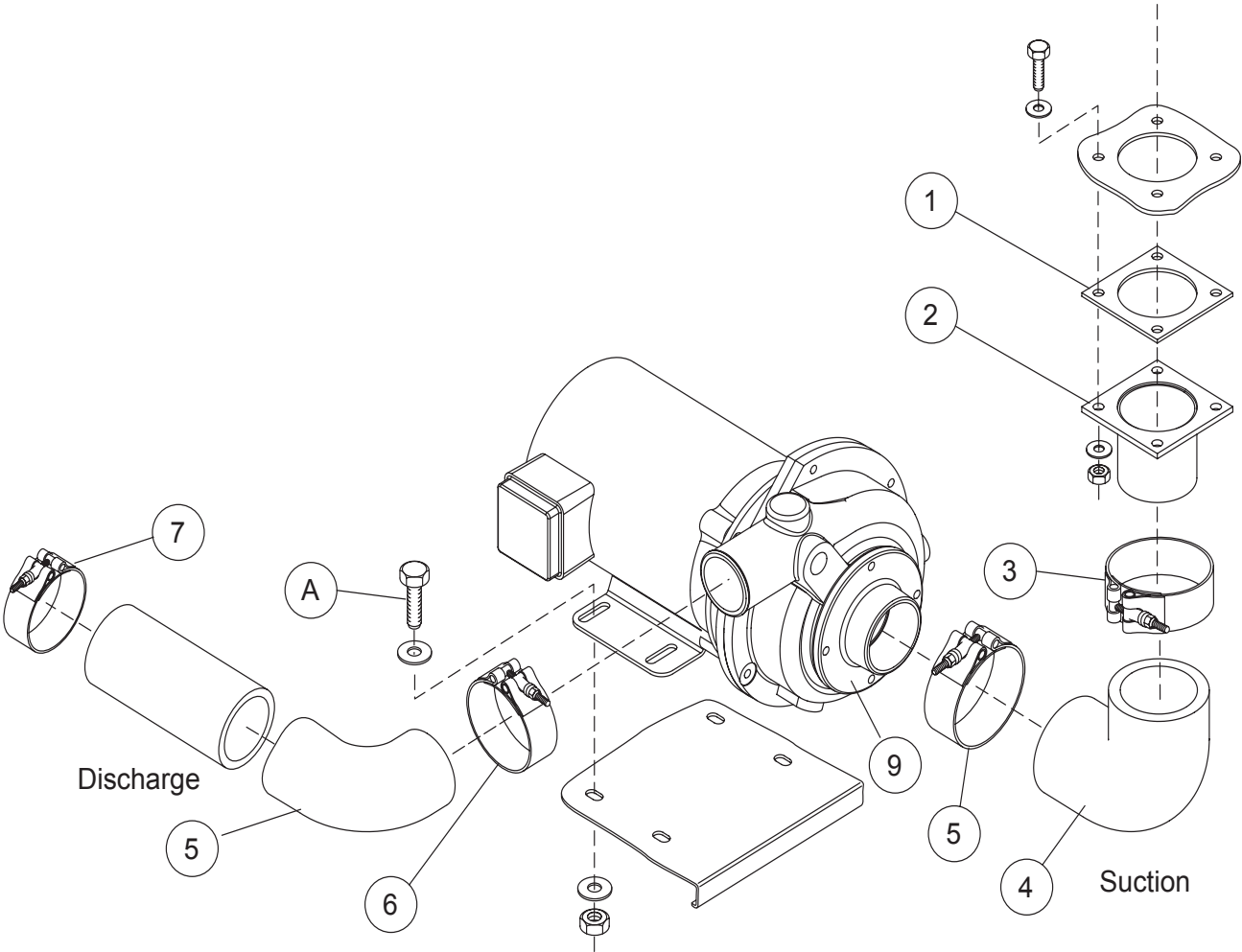
*Piping No Booster or Steam Booster • Replacement Parts*

Item No.	Part No.	Description	Qty.
1	101259	Plug, 1/8" NPT Brass	1
2	105976	Bushing, Red 3/4" NPT x 18" NPT Brass	1
3	100171	Bush Red Face 3/4" NPT x 1/2" NPT Brass	1
4	100599	Cross, 3/4"NPT Brass	1
5	100184	Nipple 3/4" NPT Close Brass	4
6	100571	Union 3/4" NPT Brass	2
7	102470	Nipple 3/4" x 3" Lg Brass	2
8	102525	Tee Red 3/4 x 1/2 x 3/4 Brass	1
9	104429	Vacuum Breaker 3/4" NPT Brass	1
--	900837	Kit*Repair, Vacuum Breaker 3/4"	A/R
10	102490	Nipple 3/4" NPT x 3-1/2"Lg Brass	1
11	102442	Elbow 3/4"NPT x 90° Brass	1
12	111437	Valve, Solenoid 3/4" HW	1
--	109903	Kit Repair 3/4 JE Stm-Wat	A/R
--	111472	Replacement Coil 3/4" Solenoid Valve	A/R
13	107418	Tee, 3/4"NPT x 3/4"NPT x 1/4"NPT Brass	1
14	102392	Bushing Red 3/4" x 1/2" NPT	1
15	100209	Nipple 1/2" NPT Brass	1
16	102514	Tee 1/2" NPT Brass	1
17	111250	Fitting Compression 1/2 OD x 1/2 MPT	1
18	102388	Bushing, Reducing 1/2" NPT x 1/4" NPT Brass	1
19	109879	Fitting, Comp 7/8OD x 3/4 MPT Brass	1
20	100135	Pressure Gauge 0-60 PSI	1
21	102521	Tee 3/4" NPT Brass	1
22	102490	Nipple 3/4" NPT x 3-1/2"Lg Brass (w/Steam Booster Only)	1

Replacement Parts • Final Rinse Drain Assembly



Item No.	Part No.	Description	Qty.
1	100141	Nut, Grip 1/4-20	1
2	305218	Strainer, F/R Drain	1
3	107342	Basket, Drain	1
4	107864	Washer, Packing-Neoprene	1
5	107345	Nut Slip	1
6	107473	Tailpiece	1
7	110245	Washer Tailpiece	1
8	110244	Nut Slip, Tailpiece	1

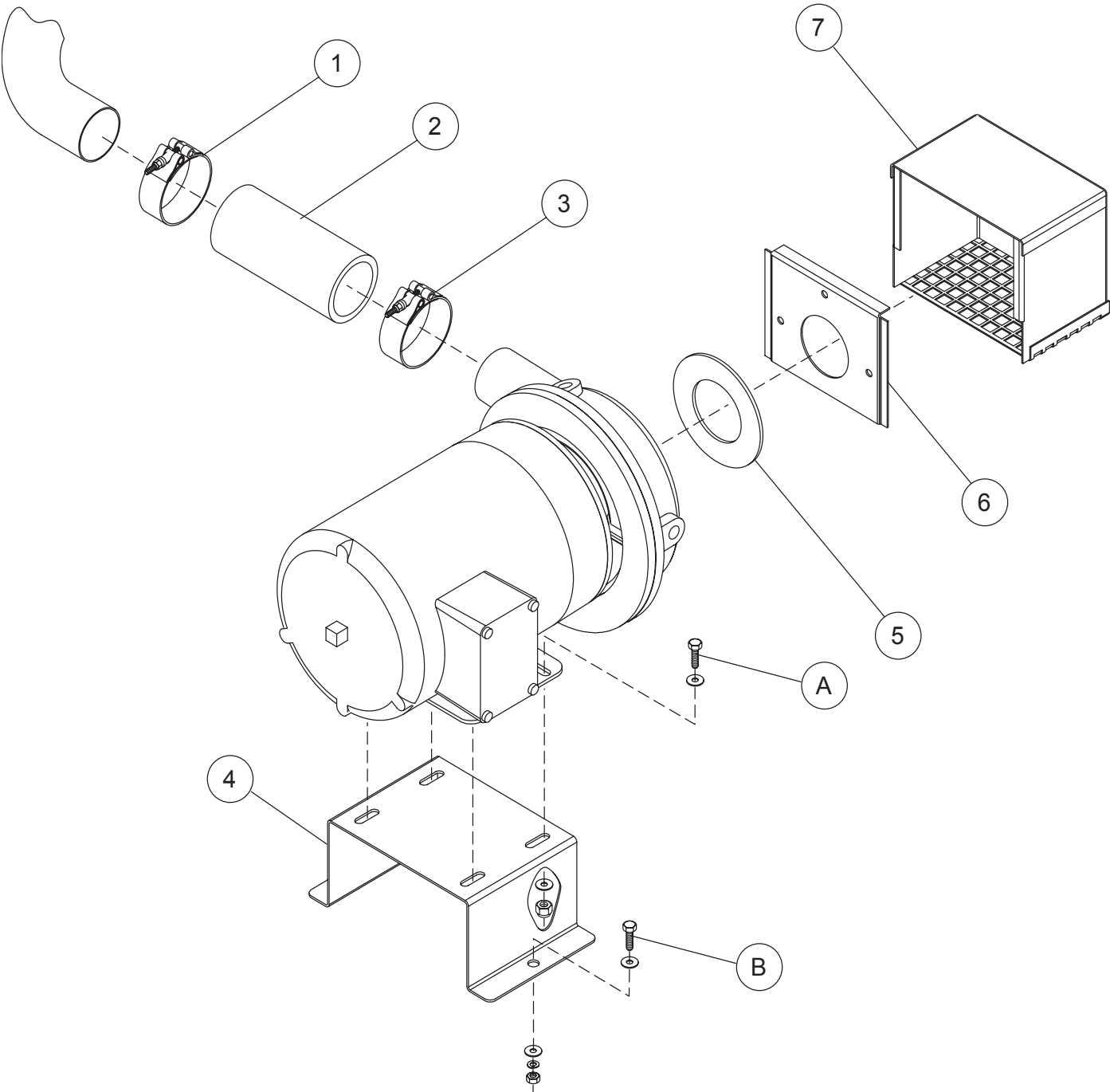


L-R Application Shown



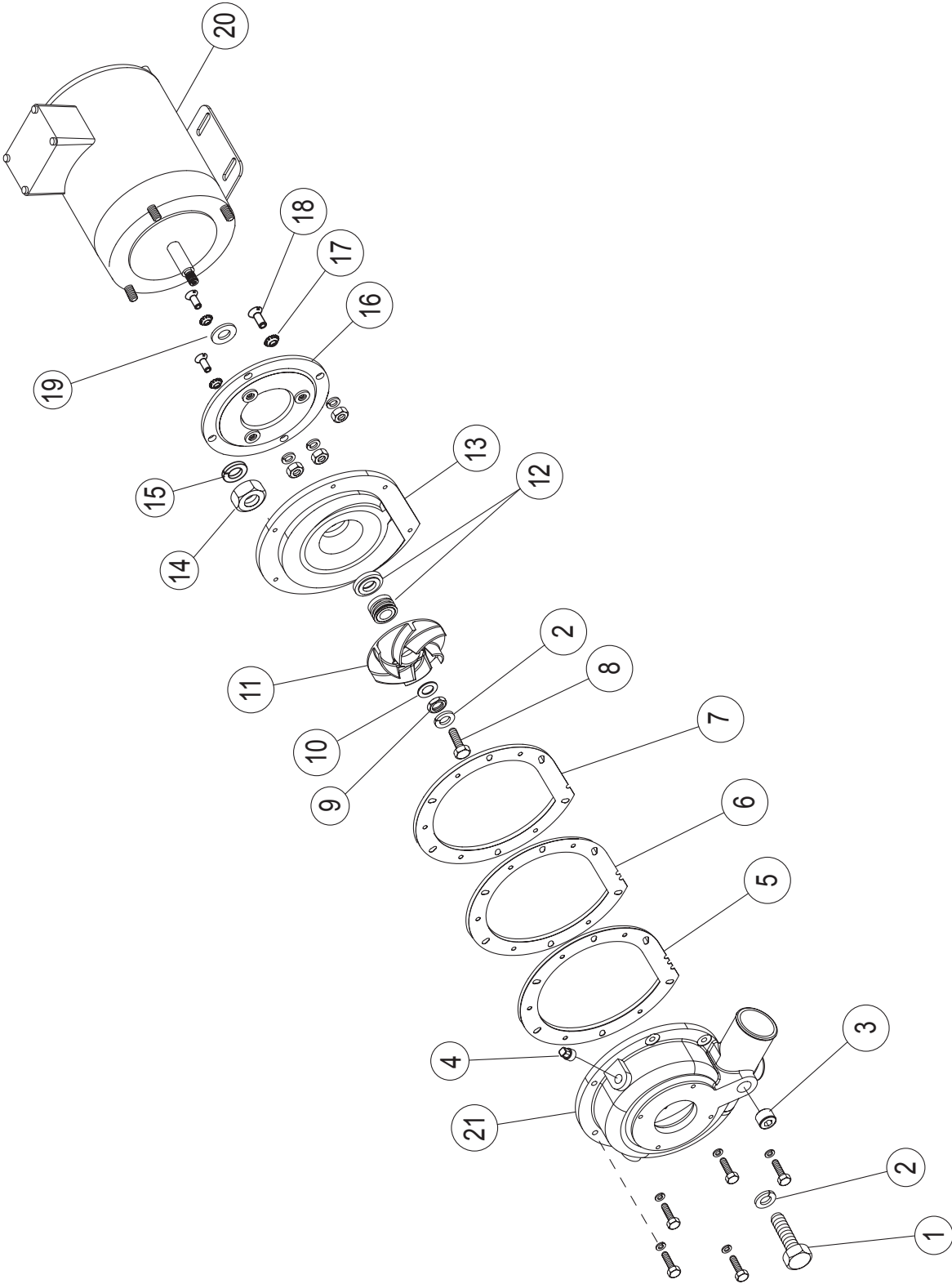
Item No.	Part No.	Description	Qty.
1	109568	Gasket Pump Suction	1
2	307995	Flange, Suction	1
3	104203	Clamp, Hose M52 SST	2
4	113717	Hose, PW Suction	1
5	113731	Hose 22" PW Pump Discharge	1
6	104165	Clamp, Hose M40 SST	1
7	111964	Hose, Clamp Discharge	1
8	311761	Strainer, Pump Suction (Not Shown)	1
9	112379	Suction, Flange Machined	1
10	112338	Gasket Pump Suction Flange (Not Shown)	1
<b>A</b>		<b>Pump Fasteners</b>	
	100739	Bolt 5/16-18 x 3/4 Hex Head SST	4
	102376	Washer 5/16 x 3/4 x 1/16	8
	109009	Nut, Grip 5/16 w/Nylon Insert	4

Replacement Parts • Wash & Rinse Pump Suction/Discharge

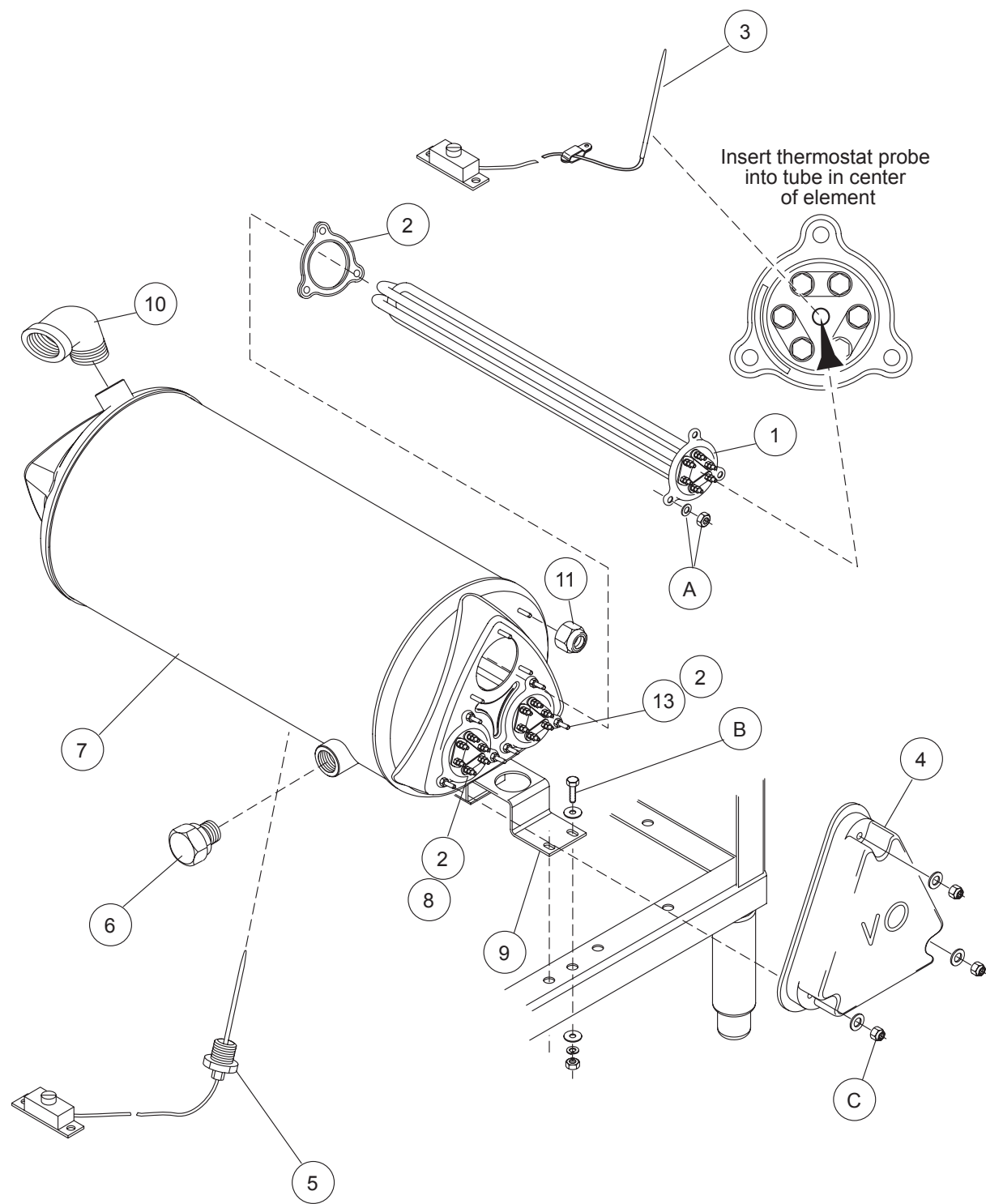


*Wash & Rinse Pump Suction/Discharge • Replacement Parts*

Item No.	Part No.	Description	Qty.
1	110858	Hose Clamp Pump Discharge	1
2	112807	Hose Discharge Pump	1
3	111780	Hose Clamp Discharge	1
4	327870	Pump Motor Base	1
5	113538	Gasket Pump Suction	1
6	327906	Plate, Pump Suction	1
7	327904	Hood Pump Suction	1
<b>A</b>		<b>Pump Base Fasteners</b>	
	100739	Bolt 5/16-18 x 3/4 Hex Head SST	4
	102376	Washer 5/16 x 3/4 x 1/16	8
	109009	Nut Grip 5/16 w/Nylon Insert	4
<b>B</b>		<b>Pump Fasteners</b>	
	100739	Bolt 5/16-18 x 3/4 Hex Head SST	4
	102376	Washer 5/16 x 3/4 x 1/16	8
	109009	Nut, Grip 5/16 w/Nylon Insert	4

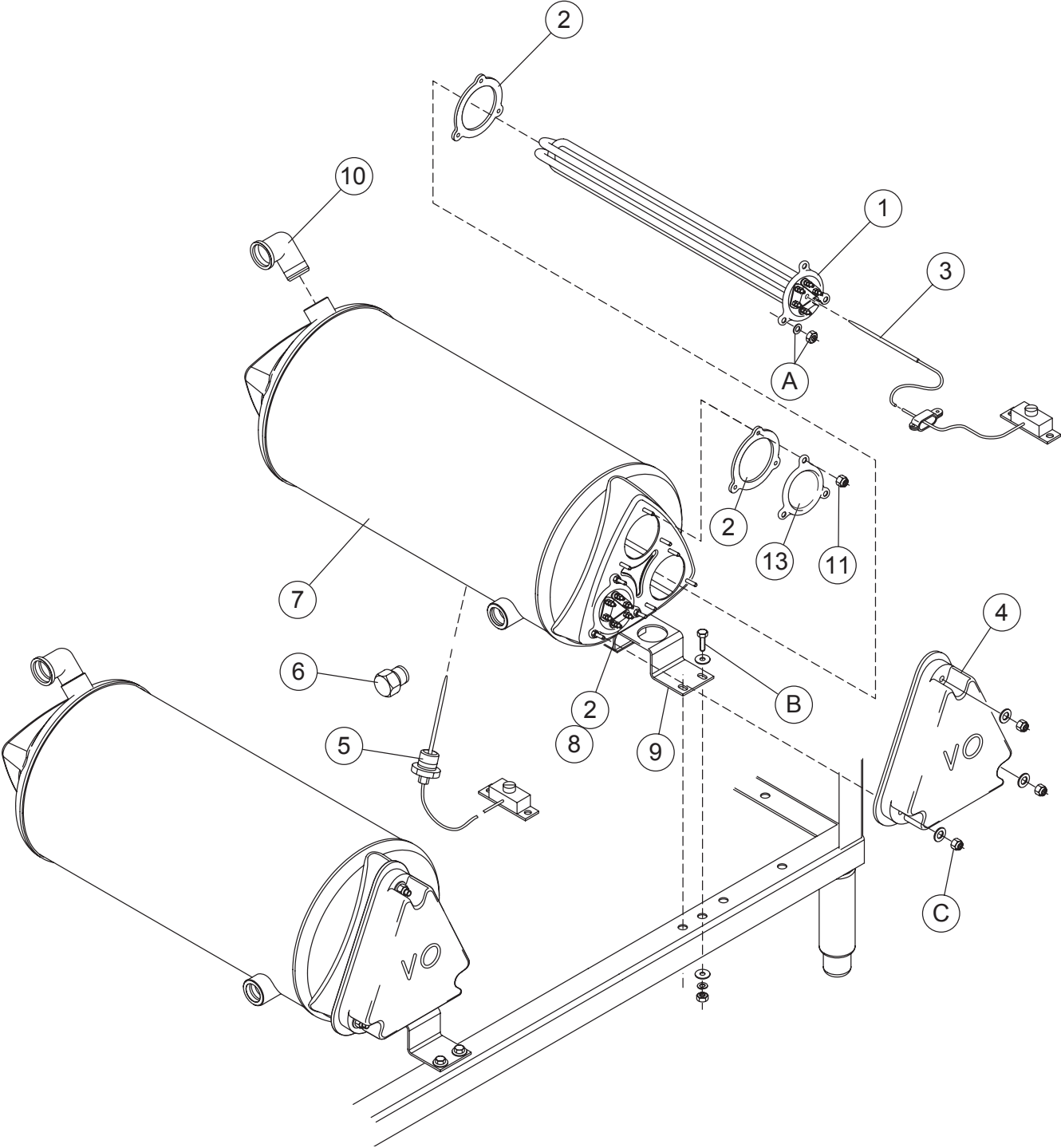


Item No.	Part No.	Description	Qty.
1	100736	Screw 1/4-20 x 3/4 Hex Head	6
2	106482	Washer, Lock 1/4"	10
3	113705	Plug 1/2" NPT Countersunk Brass (2HP) (Wash/Rinse)	1
3	102504	Plug 1/2" NPT Brass Sq Head (1HP) (Prewash)	1
4	102500	Plug 1/4" NPT Brass	2
5	111943	Gasket .032 Thk (3 Notches)	1
6	111942	Gasket .015 Thk (2 Notches)	1
7	111941	Gasket .0085 Thk (1 Notch)	1
8	100735	Screw 1/4-20 x 5/8 Hex Head	1
9	110247	Nut Jam Hex 7/16-20 SST	1
10	110248	Washer .44OID x .043SST	1
11	113118	Impeller 1HP, SST Machined (Prewash)	1
	113603	Impeller 2HP, SST Machined (Wash/Rinse)	1
12	111111	Seal Pac Type 16	1
13	113635	Flange, Jet Pump, SST NG	1
14	107690	Nut, Jam 3/8-16	4
15	106407	Washer, Lock 3/8 Split	4
16	204460	Backing Plate 1Hp, 2HP, 3HP	1
17	110270	Washer, C-Sunk, Ex-Tooth SST	3
18	100754	Screw 10-32 x 1/2 Flat Head	3
19	109654	Slinger-Comenda	1
20	113420	Motor 1HP 208-240/460 60Hz/3Ph	A/R
	113420	Motor 2HP 208-240/460/60Hz/3Ph (Wash/Rinse)	1
21	112380	Pump Volute Machine (Prewash)	1
	113634	Pump Volute SST (Wash/Rinse)	1
---	112338	Gasket, Pump Suction Flange (Not Shown)	1
	451523	Pump Assy 1HP 3Ph R-L Complete (Prewash)	A/R
	414506	Pump Assy 2HP LH Complete (Wash/Rinse)	A/R
	414505	Pump Assy 2HP RH Complete (Wash/Rinse)	A/R
	900737	Kit*Gaskets, Jet Pump (Includes Items 5-7)	A/R
	900183	Kit*Seal & 1HP Impeller (Includes Items 5-7, 11 and 12)	A/R
	900861	Kit*Seal & 2Hp Impeller (Includes Items 5-7, 11 and 12)	A/R



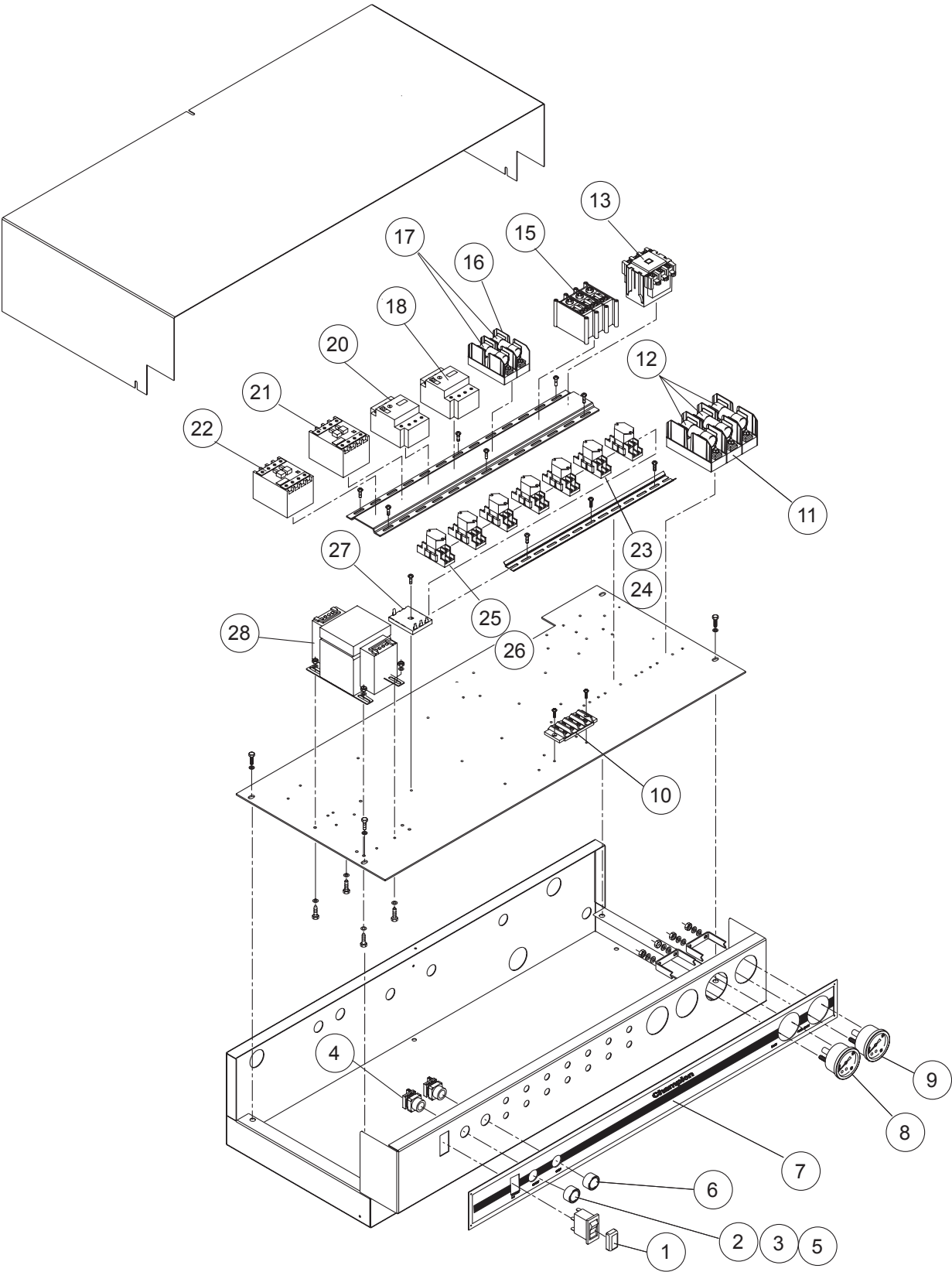
*Electric Booster Assembly - 40°F/60°F Rise • Replacement Parts*

Item No.	Part No.	Description	Qty.
1	113690	Heater, 12KW 208/60/3Ph (60°F)(200-220V/1Ph & 3PH)	1
	113885	Heater, 12KW 220/230/240/380/415V 3Ph (60°F)(230-240/1PH & 3PH)	1
	113886	Heater, 12KW 460/480V 3Ph (60°F)	1
	113887	Heater, 12KW 575V 3Ph(60°F)	1
	111233	Heater 7.5/10KW 240V 3Ph (40°F Rise)(200-220,230-240V/1PH)	1
	111232	Heater, 10KW 208V 3PH (40°F Rise)(220-220/3PH)	1
	111234	Heater, 10KW 480V 3PH (40°F Rise (480V 3PH)	1
	111383	Heater, 10KW 575V3PH (40°F Rise)(480V 3PH)	1
2	109985	Seal, Electric Heater Flange	3
3	113724	Thermostat w/Capillary 210°F	1
4	108576	Cover, Booster No Cutout	1
5	109069	Thermostat w/ Capillary	1
6	102505	Plug 3/4" NPT Brass	1
7	414331	Tank Booster (40°F Rise)	1
8	113690	Heater, 12KW 208/60/3Ph (40°F)(200-220V/1Ph & 3PH)	1
	113885	Heater, 12KW 220/230/240/380/415V 3Ph (40°F)(230-240/1PH & 3PH)	1
	113886	Heater, 12KW 460/480V 3Ph (40°F)(460-480°/3PH)	1
	112059	Heater, 12KW 208V 3Ph (60°F Rise)(200-220V/1PH & 3PH)	2
	111334	Heater 12KW 240V 3Ph (60°F Rise) (230-240/1PH & 3PH)	2
	112060	Heater 12KW 460/480V 3Ph(60°F Rise)(460-480/3PH)	2
	112061	Heater 12KW 575V 3Ph (60°F Rise)	2
9	328254	Bracket, Front Booster	1
10	113706	Elbow Street 3/4 x 45 Brass (E-44)	1
11	108954	Nut Grip 6-32 w/Nylon Insert	1
12	328048	Clamp, Thermostat Booster Tank (Not shown, use with item 11)	1
13	111235	Heater, 5/6.6KW 208/240 (40° Rise)(200-220V/1PH & 3PH)	1
	111236	Heater 5KW 240V 3PH (40°F Rise)(230-240V1PH & 3PH)	1
	111237	Heater 5KW 480V 3PH (40°F Rise) (460-480V/3PH)	1
	111384	Heater 5KW 575V 3PH (40°F Rise)(460-480V/3PH)	1
<b>A</b>		<b>Element Fasteners (Qty per Element)</b>	
	100003	Nut Plain 1/4-20	9
	106482	Washer Lock 1/4 Split	9
<b>B</b>		<b>Booster Tank Fasteners</b>	
	100739	Bolt 5/16-18 x 3/4 Hex Head SST	4
	106013	Washer Lock 5/16 Split	4
	109205	Nut, Grip 5/16 w/Nylon Insert	4
<b>C</b>		<b>Element Cover Fasteners</b>	
	107697	Nut Grip 1/4-20 w/Nylon insert	3
	106026	Washer Flat 1/4"	3





Item No.	Part No.	Description	Qty.
1	113690	Heater, 12KW 208/60/3Ph (200-220V/1Ph & 3PH)	1
	113885	Heater, 12KW 220/230/240/380/415V 3Ph (230-240/1PH & 3PH)	1
	113886	Heater, 12KW 460/480V 3Ph	1
	113887	Heater, 12KW 575V 3Ph	1
2	109985	Seal, Electric Heater Flange	6
3	113724	Thermostat w/Capillary 210°F	1
4	108576	Cover, Booster No Cutout	2
5	109069	Thermostat w/ Capillary	2
6	102505	Plug 3/4" NPT Brass (Not Shown) (On Opposite Side)	2
7	414331	Tank Booster	2
8	112059	Heater, 12KW 208V 3Ph (200-220V/1PH & 3PH)	2
	111334	Heater 12KW 240V 3Ph (230-240/1PH & 3PH)	2
	112060	Heater 12KW 460/480V 3Ph(460-480/3PH)	2
	112061	Heater 12KW 575V 3Ph	2
9	328254	Bracket, Front Booster	2
10	113706	Elbow Street 3/4 x 45 Brass E-44	2
11	108954	Nut Grip 6-32 w/Nylon Insert	2
12	328048	Clamp, Thermostat Booster Tank (Not shown, use with item 11)	2
13	109458	Flange Heater Bloc/off	2
<b>A</b>		<b>Element Fasteners (Qty per Element)</b>	
	100003	Nut Plain 1/4-20	9
	106482	Washer Lock 1/4 Split	9
<b>B</b>		<b>Booster Tank Fasteners (Qty per Booster)</b>	
	100739	Bolt 5/16-18 x 3/4 Hex Head SST	4
	106013	Washer Lock 5/16 Split	4
	109205	Nut, Grip 5/16 w/Nylon Insert	4
<b>C</b>		<b>Element Cover Fasteners (Qty per Cover)</b>	
	107697	Nut Grip 1/4-20 w/Nylon insert	3
	106026	Washer Flat 1/4"	3

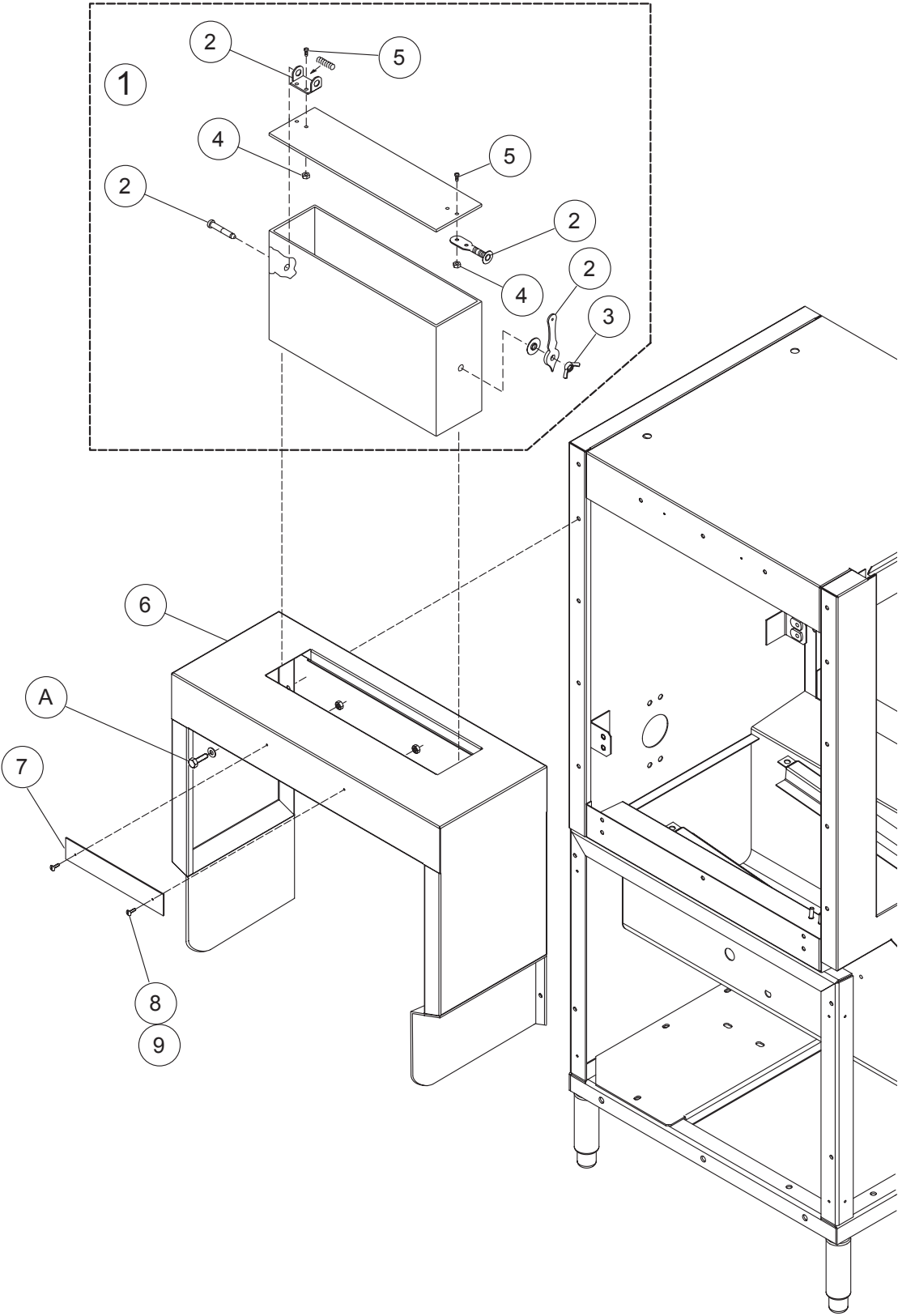


Item No.	Part No.	Description	Qty.
1	111980	Circuit Breaker On/Off 5amp	1
2	113814	Switch Pushbutton Green Illuminated	1
3	113752	Mounting Base Led Green	1
4	113812	Contact Block NO W/O Base	1
5	113140	Boot, Silicone Pushbutton	2
6	900726	Red Pushbutton (Includes (1) of Item 5)	1
		<b>Includes the following:</b>	
	111615	Red Push Button	1
	111616	Contact Block NC w/holder	1
7	113684	Decal 44/54 Cabinet (Single Tank)	1
7	113710	Decal 40/60/64 Cabinet (Two Tank)	1
8	107440	Thermometer 8ft Flanged (Wash) (Single Tank)	1
8	107440	Thermometer 8ft Flanged (Rinse) (Two Tank)	1
9	113622	Thermometer 4Ft Gas Filled (Final Rinse)	1
10	100294	Terminal Block 6PT	1
--	112296	Label Detergent/Rinse Signal (Not Shown)	1
11	108424	Fuse Block 600V/100A 3P (208-220V/1PH)(230-240V/1PH)	1
11	180171	Fuse Block 600V/60A 3P (208-220V/3PH)(230-240V/3PH)	1
11	180171	Fuse Block 600V/60A 3P (230-240V/3PH)(Two Tank)	2
11	111135	Fuse Block 600V/30A 3P (460-480V/3PH)(Single Tank)	1
11	111135	Fuse Block 600V/30A 3P (460-480V/3PH) (Two Tank)	2
12	108448	Fuse T 90A 250V Fast Act (208-220V/1PH)	2
12	180059	Fuse T 80A 250V Fast Act (230-240V/1Ph)	2
12	180175	Fuse J 50A 600V Fast Act (208-220V/3PH)	3
12	180175	Fuse J 50A 600V Fast Act (230-240V/1PH)(Two Tank Only)	2
12	180174	Fuse J 45A 600V Fast Act (230-240V/3PH)	3
12	180243	Fuse J 25A 600V Fast Act (460-480V/3PH)	3
12	111231	Fuse T 90A 250V Fast Act (208-220V/1PH)(Two Tank Only)	2
12	180176	Fuse J 60A 600V Fast Act (208-220V/1PH)(Two Tank Only)	2
12	180172	Fuse J 35A 600V Fast Act (208-220V/3PH)(Two Tank Only)	3
12	111683	Fuse J 30A 600V Fast Act (230-240V/3PH)(Two Tank Only)	3
12	112062	Fuse J 20A 600V Fast AcT (460-480V/3PH)(Two Tank Only)	3
13	111231	Contactor 75FLA 3p ( Tank Heat) (208-220V/1PH)(230-240V/1PH)	1
13	111827	Contactor 60FLA 3P (Tank Heat) (208-220V/3PH), (230-240V/3PH), (460-480V/3PH)	1
13	111827	Contactor 60FLA 3P (Tank Heat)(208-220V/3PH)(Two Tank Only)	2
14	103310	Wire Lug QA-2 (Not Shown)	1
15	111833	Terminal Block 185A 3Pole 600V	1
16	106402	Fuse Block 600V/30A 2P (208-220V/1PH & 3PH)(230-240V/1PH)	1
17	111821	Fuse ATDR-3 600V Time Delay (208-220V/1PH & 3PH), (230-240V/1PH & 3PH), (460-480V/3PH)	2

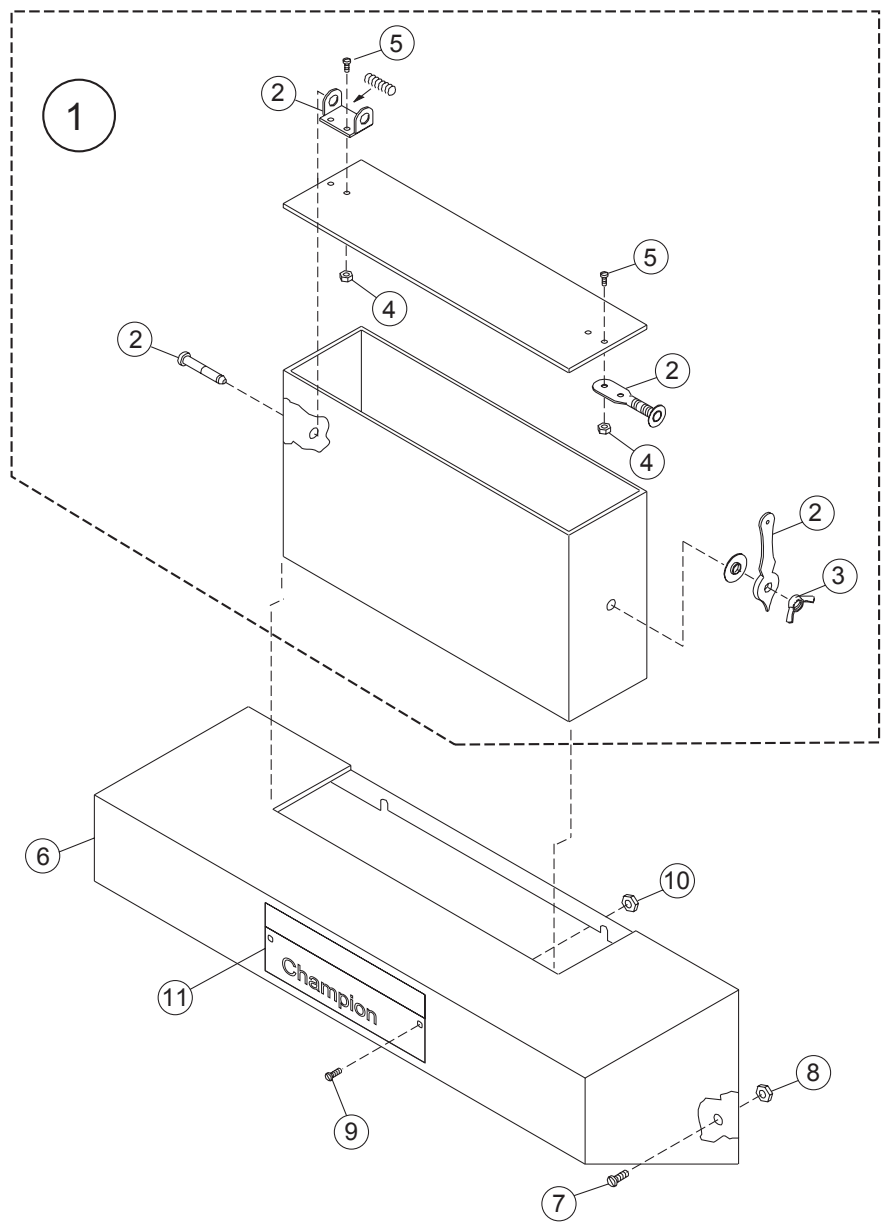
Replacement Parts • Control Cabinet

Item No.	Part No.	Description	Qty.
18	111630	Starter Mtr 13.0-18.0 (Wash) (208-220V/1PH),(230/240V/1PH) (Single Tank)	1
18	111630	Starter Mtr 13.0-18.0 (Wash/Rinse) (208-220V/1PH), (230/240V/1PH)(Two Tank)	2
18	110807	Starter Mtr OL GV2-M14 W/Aux (Wash) (208-220V/3PH), (230-240V/3PH) (Single Tank)	1
18	110807	Starter Mtr OL GV2-M14 W/Aux (Wash/Rinse) (208-220V/3PH), (230-240V/3PH) (Two Tank)	2
18	110805	Starter Mtr 2.5-4.0A w/Auxillary(Wash) (460-480V/3PH) (Single Tank)	1
19	113161	Starter Mtr OL 9.0-14.0 Amps (Prewash)(1HP) (208-220V/1PH) (230-240V/1PH)(Not Shown)	1
19	110806	Starter Mtr OL GV2-M10 w/Auxillary (Prewash) (1HP) (208-220V/3PH), (230-240V/3PH)(Not Shown)	1
19	110804	Starter Mtr OL GV2-M07 w/Auxillary (Prewash (1HP) (460-480V/3PH) (Not Shown)	1
20	110803	Starter Mtr OL GV2-M06 w/Aux (Drive) (208-220V/1PH & 3PH) (230-240V/1PH & 3PH)	1
20	110801	Starter Mtr OL GV2-M04 w/Auxillary (Drive)(460-480V/3PH)	1
---	111639	Auxillary Switch (Attached to Overload) (Not Shown)	A/R
21	108122	Contactactor 12A (Motor)(Prewash,Wash, Rinse)(208-220V/3PH), (230-240V/3PH), (460-480V/3PH)	1
21	109582	Contactactor 25A (Motor) (Wash/Rinse) (208-220V/1PH)(230-240V/1PH)	1
22	108122	Contactactor 12A (Motor) (Drive)	1
23	111036	Relay Socket (Single/Two Tank)	6
23	113036	Relay Socket (w/Prewash)	7
24	111068	Relay 2PDT 10A 120VAC (Single/Two Tank)	6
24	111068	Relay 2PDT 10A 120VAC (w/Prewash)	7
---	113271	Suppressor, ARC (Single/Two Tank) (Not Shown)	5
---	113271	Suppressor, ARC (w/Prewash) (Not Shown)	6
25	112415	Relay Socket 3Pole	1
26	112382	Relay 3PDT 10A 120VAC	1
27	113782	Timer Fixed 90 Seconds	1
28	109064	Transformer 250VA 240/480, 230/460	1

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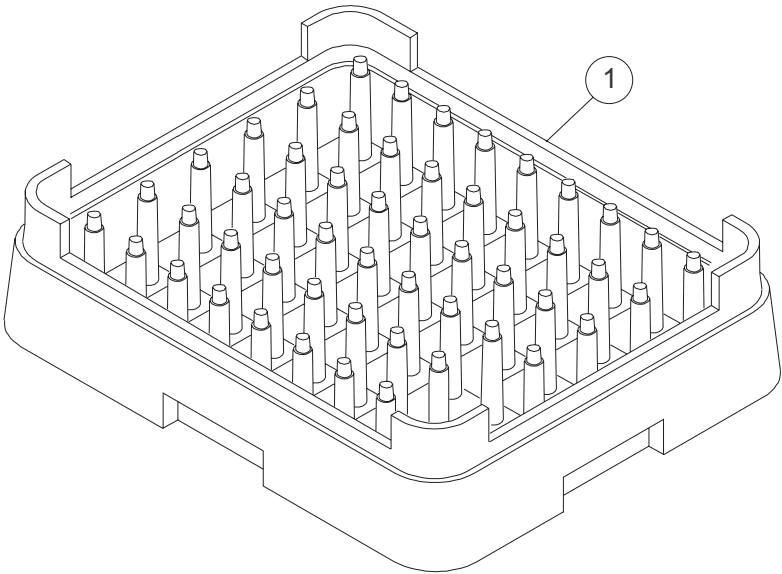
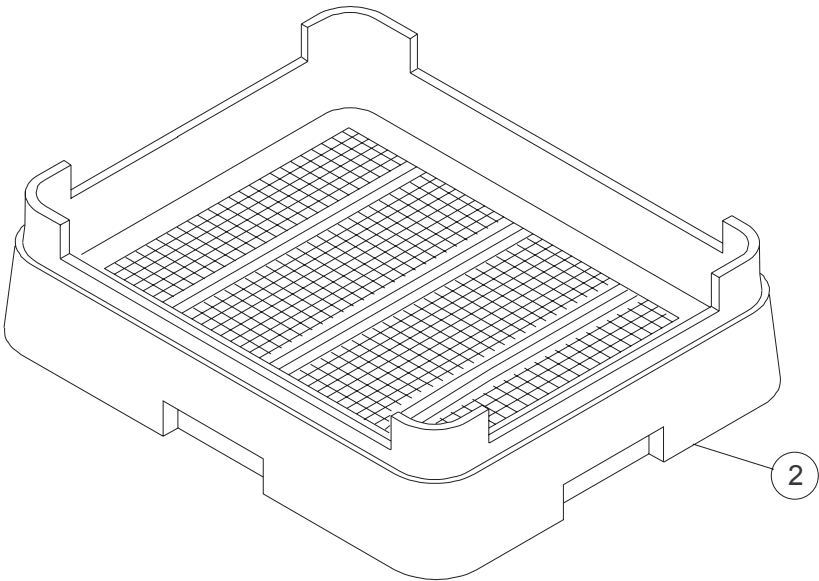


Item No.	Part No.	Description	Qty.
1	401487	Vent Stack Assembly (Includes Items 2-5)	2
2	201589	Regulator Assembly	2
3	112258	Nut Wing 1/4-20 SST	2
4	108954	Nut, Grip 6-32 w/Nylon Insert	4
5	104883	Screw 6-32 x 3/8" Round Head	4
6	328344	Vent Cowl	2
7	109158	Nameplate "Champion"	2
8	107015	Screw 4-40 x 1/4 Round Head	4
9	107016	Nut Grip 4-40 w/Nylon Insert	4
<b>A</b>		<b>Vent Cowl Fasteners (Qty per Cowl)</b>	
	100734	Bolt 1/4-20 x 1/2 Hex Head SST	4
	106482	Nut Grip 1/4-20 SST	4



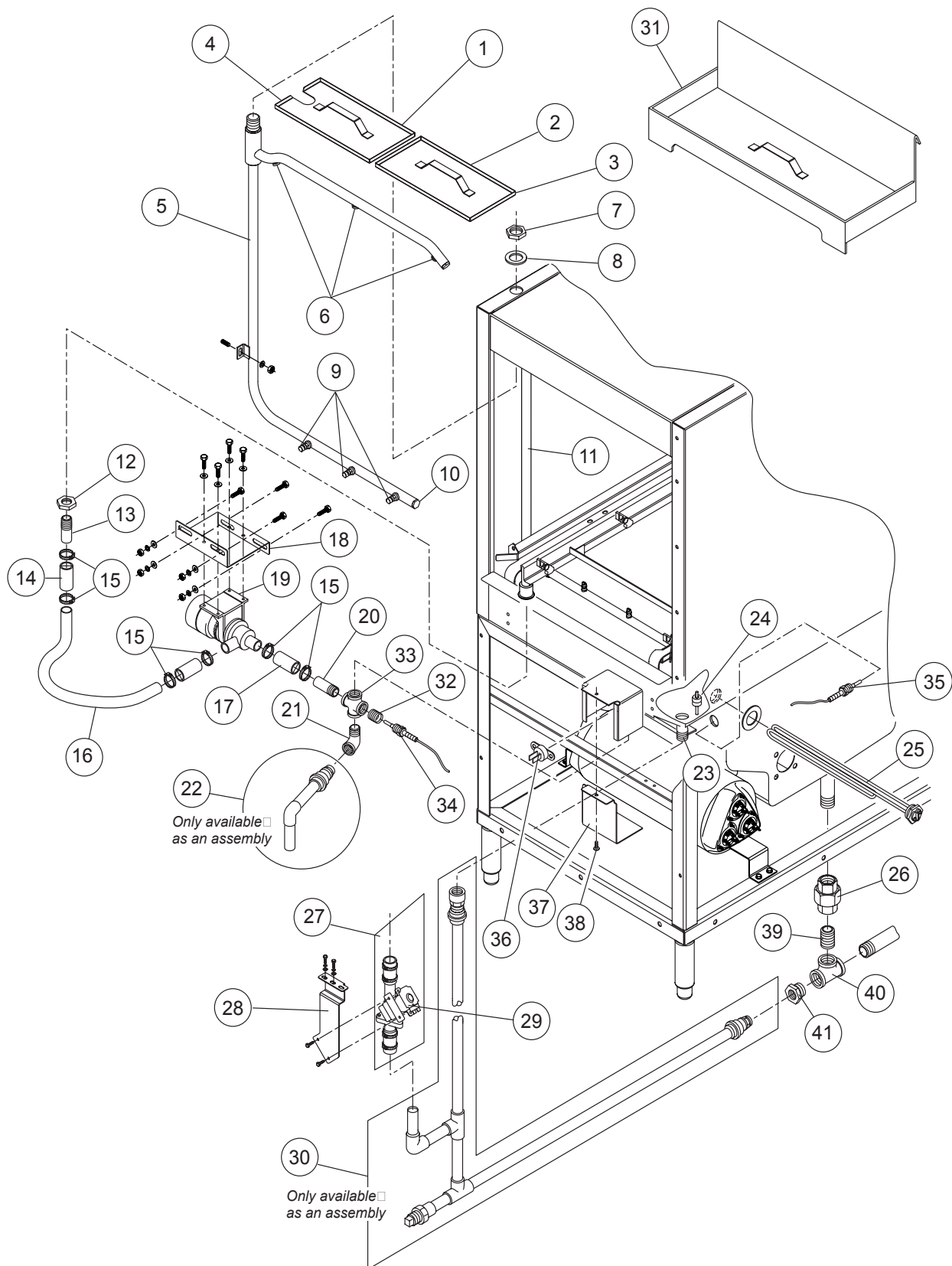


Item No.	Part No.	Description	Qty.
1	401487	Vent Stack Assembly (Includes items 2-5)	2
2	201589	Regulator Assembly	2
3	112258	Nut, Wing 1/4-20 SST	2
4	108954	Nut, Grip 6-32 w/Nylon Insert	8
5	104883	Screw 6-32 x 3/8 Round Head	8
6	307228	Vent Hood	2
7	100734	Belt 1/4-20 x 1/2" Hex Head	4
8	100141	Nut Grip 1/4-20	8
9	107015	Screw 4-40 x 1/4 Round Head	4
10	107016	Nut Grip 4-40 w/Nylon Insert	4
11	109518	Nameplate "Champion"	1
--	401889-S	Vent Hood Assembly (Includes Items 1-10)	

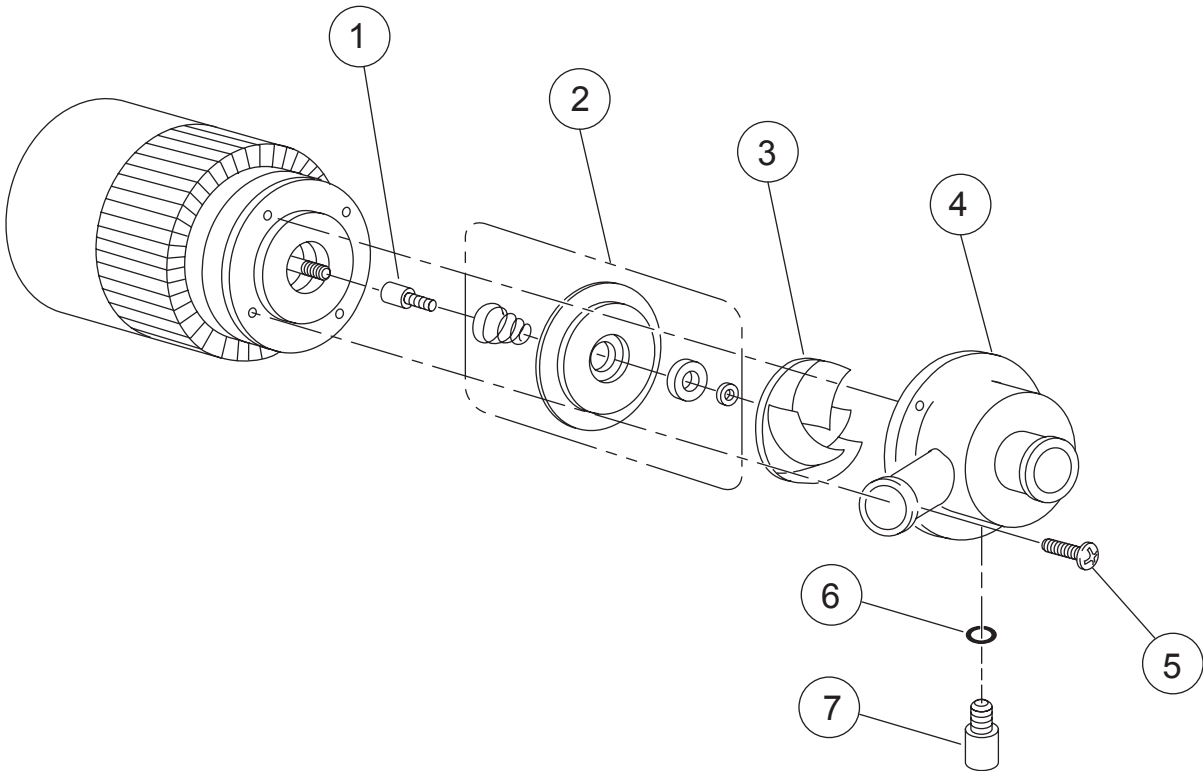


Item No.	Part No.	Description	Qty.
1	101285	Rack Peg	1
2	101273	Rack Combination	1

# Replacement Parts • E-44DR Dual Rinse Assembly



Item No.	Part No.	Description	Qty.
1	329562	Screen, E44DR, R-L	1
2	329465	Screen, E44DR, R-L Rinse	1
3	329466	Screen, E44DR, L-R Rinse	1
4	329281	Screen, E44DR, L-R Rinse	1
5	329265	Manifold	1
6	180282	Nozzle	3
7	100156	Nut	1
8	108620	Gasket	1
9	112022	Nozzle	3
10	113795	Plug	1
11	329167	Manifold, Auxiliary Rinse	1
12	100156	Locknut	1
13	102102	Tubing	1
14	114021	Hose x 2-3/4" x 1" OD	1
15	105993	Clamp	6
16	206501	Tube, discharge L-R	1
---	206503	Tube, discharge R-L	1
17	114020	Hose, 1-1/8" OD x 2-3/4"	1
18	329276	Bracket, Pump	1
19	0502692	Recycle Pump (Parts breakdown on next page)	1
20	110454	Nipple, Toe	1
21	102444	Elbow, street 90°	1
22	601814	Upper piping assy E44DR, Auxiliary	1
23	110454	Nipple, Toe	1
24	111443	Switch, float	1
25	113996	Heating Element	1
26	100589	Union, 1-1/2	1
27	415960	Piping Assy, drain	1
28	329467	Bracket, DR drain valve	1
29	0306618	Drain Valve	1
30	601707	Manifold, E44DR	1
31	331017	Basket, scrap	1
32	201241	Bushing, Face reducing	1
33	100537	Cross, Tee	1
34	113622	Gauge, Temperature	1
35	109069	Thermostat, control	1
36	113604	Thermostat, fixed High limit	1
37	322892	Cover, box	1
38	100007	Screw, 10-32 x 3/8 Truss Hd	1
39	100443	Nipple, close, 1-1/2	1
40	100036	Tee, 1-1/2"	1
41	100595	Bushing, reducer	1



Item No.	Part No.	Description	Qty.
1	0502734	Stub Shaft	1
2	0502730	Seal Assembly (c/w spring)	1
3	0502729	Impeller	1
4	329281	Pump Housing	1
5	0501406	Screw, 8-32 x 1/2"	4
6	0501635	O-ring	1
7	0502732	Seal Screw, Housing	1
---	0502692	Pump Assembly, Complete (c/w motor and items 1-7)	1
		<b><i>(Motor is not available as a separate service part)</i></b>	

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## *Electrical Schematics*

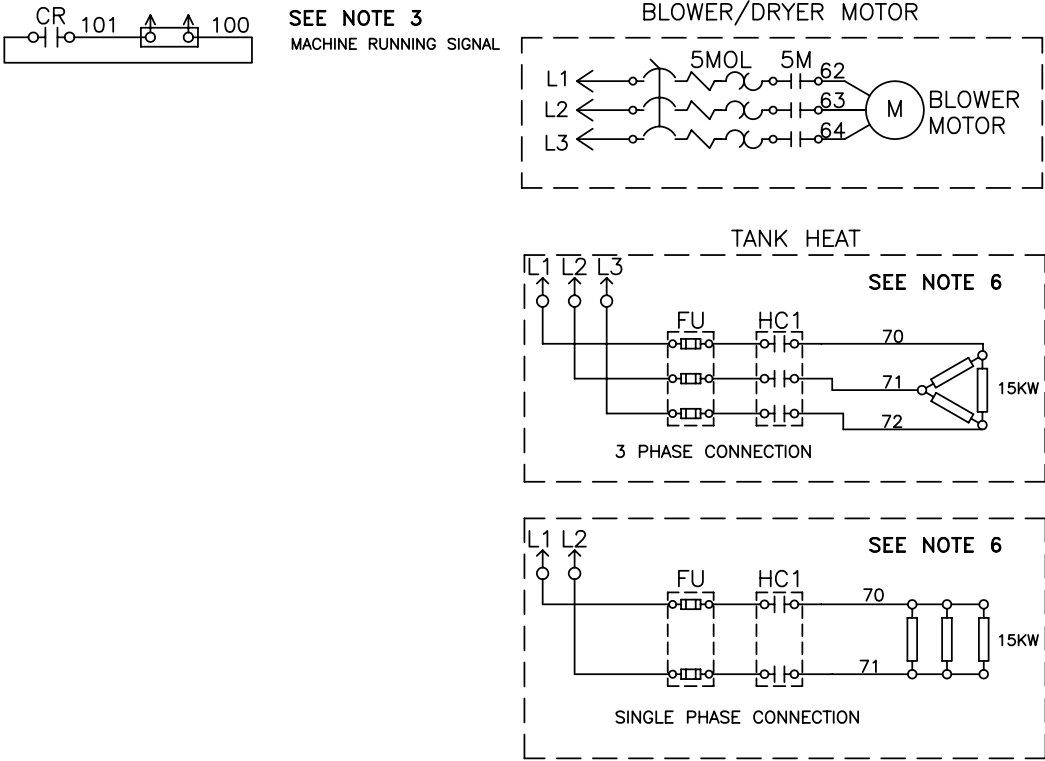
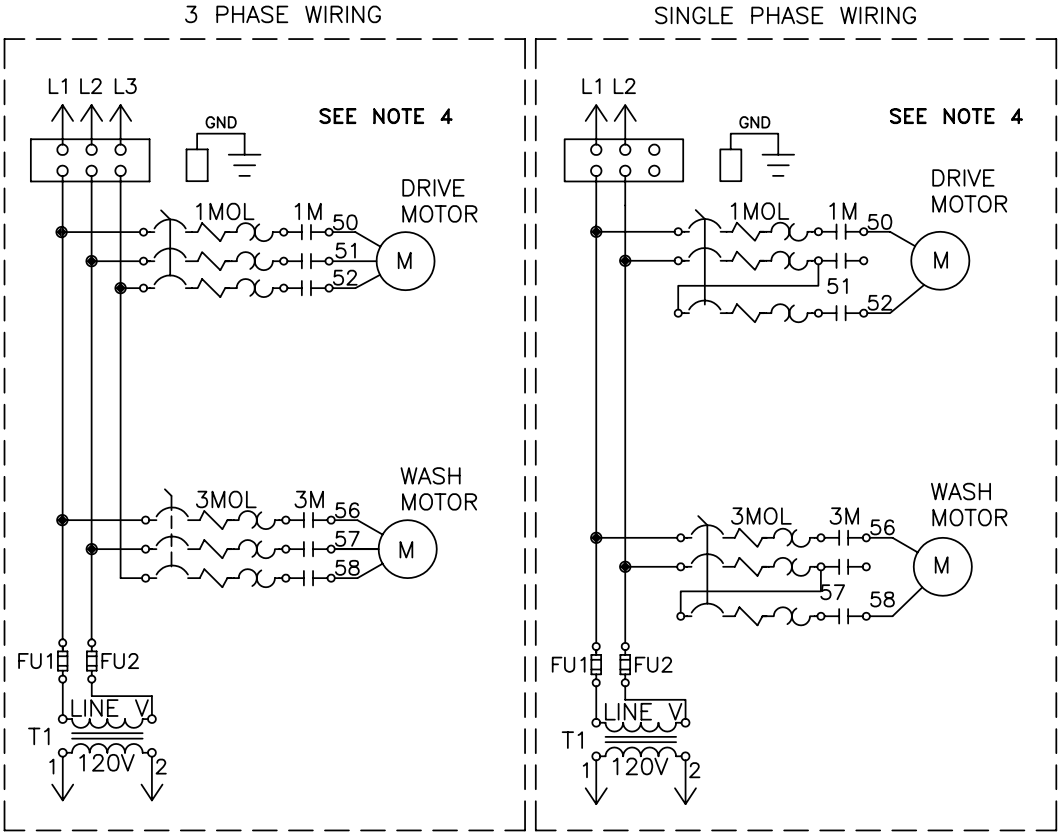
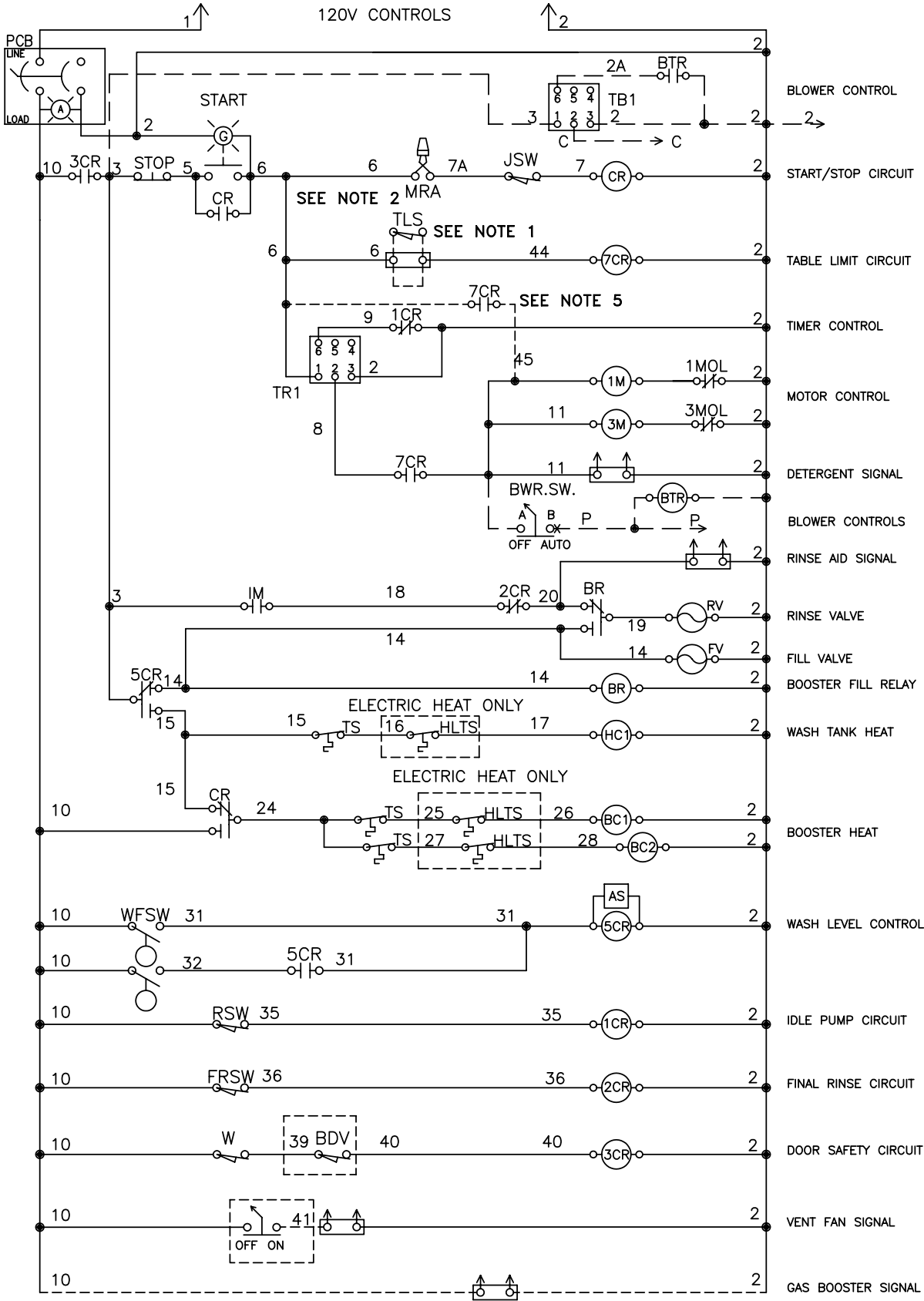
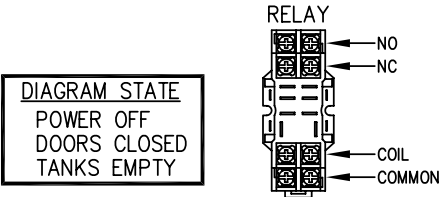
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MODELS COVERED BY THIS DRAWING	
44	
44 LT	
54	

NOTES:

- WHEN TABLE LIMIT SWITCH IS USED REMOVE JUMPER AND CONNECT LEADS BETWEEN WIRES 6 AND 44 ON TERMINAL BLOCK IN PANEL.
- WHEN AN MRA TABLE IS USED CONNECT MRA JAM SWITCH TO WIRES 6 AND 7A IN JUNCTION BOX ON FRONT OF MACHINE.
- USED FOR MACHINE RUNNING SIGNAL.
- DRIVE MOTOR CONNECTED SINGLE PHASE FOR 200-240 VOLT MODELS.
- ON MODELS WITH SIDE LOADER OPTION DRIVE MOTOR CONTACTOR 1M IS CONNECTED TO WIRE #45 INSTEAD OF WIRE #11.
- ON MODELS WITH MULTIPLE ELECTRIC CONNECTIONS, MAKE HEATER POWER CONNECTIONS AT THE HEATER FUSE BLOCK.

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
5CR	WASH FILL RELAY
7CR	TABLE LIMIT SWITCH RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BDV	BLOWER DOOR SWITCH
BR	BOOSTER RELAY
BTR	BLOWER TIMER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
FRSW	FINAL RINSE SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONTACTOR/STEAM VALVE
HLTS	HIGH LIMIT THERMOSTAT
JSW	JAM SWITCH
PCB	POWER SWITCH/CIRCUIT BREAKER
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TB1	BLOWER TIMER
TLS	TABLE LIMIT SWITCH
TR1	IDLE PUMP TIMER
TS	THERMOSTAT
W	WASH DOOR SWITCH
WFSW	WASH TANK FLOAT SWITCH



CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR.BY J.MCALLISTER	SCALE	NONE	
DATE 17OCT03	SHEET 1	OF 1	

REV.	DESCRIPTION	DATE	BY
B	REMOVED JUMPER FOR BR RELAY	9AUG04	JAM
C	ADDED NOTE 5 ADDED WIRING FOR SIDeloader	27SEP04	JAM
D	MOVED TABLE LIMIT CIRCUIT	1DEC04	JAM

REV.	DESCRIPTION	DATE	BY
E	MOVED RINSE AID CIRCUIT	5JAN05	JAM
F	MODIFIED BLOWER CONTROLS, MRA CONNECTION, NOTES 1 AND 2	7AUG06	JAM
G	MODIFIED BLOWER CONTROLS	14DEC06	JAM

<div> <div>Champion</div> <div>The Dishwashing Machine Specialists</div> </div>		<div>SINGLE TANK RACK CONVEYOR</div> <div>STEAM/ELECTRIC HEAT</div>	
B	701820	REV.	G

MODELS COVERED BY THIS DRAWING	
64	
72	
84	

NOTES:

- WHEN TABLE LIMIT SWITCH IS USED REMOVE JUMPER AND CONNECT LEADS BETWEEN WIRES 6 AND 44 ON TERMINAL BLOCK IN PANEL.
- WHEN AN MRA TABLE IS USED CONNECT MRA JAM SWITCH TO WIRES 6 AND 7A IN JUNCTION BOX ON FRONT OF MACHINE.
- USED FOR MACHINE RUNNING SIGNAL.
- DRIVE MOTOR CONNECTED SINGLE PHASE FOR 200-240 VOLT MODELS.
- ON MODELS WITH SIDE LOADER OPTION DRIVE MOTOR CONTACTOR 1M IS CONNECTED TO WIRE #45 INSTEAD OF WIRE #11.
- ON MODELS WITH MULTIPLE ELECTRIC CONNECTIONS, MAKE HEATER POWER CONNECTIONS AT THE HEATER FUSE BLOCK.

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	RINSE FILL RELAY
5CR	WASH FILL RELAY
7CR	TABLE LIMIT SWITCH RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
4M	RINSE MOTOR CONTACTOR
4MOL	RINSE MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BDV	BLOWER DOOR SWITCH
BR	BOOSTER RELAY
BTR	BLOWER TIMER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
FRFV	FINAL RINSE FILL VALVE
FRSW	FINAL RINSE SWITCH
FU_	FUSE
HC-	HEAT CONTACTOR/STEAM VALVE
HLTS	HIGH LIMIT THERMOSTAT
JSW	JAM SWITCH
PCB	POWER SWITCH/CIRCUIT BREAKER
R	RINSE DOOR SWITCH
RFSW	RINSE TANK FLOAT SWITCH
RSW	RACK SWITCH
T1	CONTROL TRANSFORMER
TB1	BLOWER TIMER
TLS	TABLE LIMIT SWITCH
TR1	IDLE PUMP TIMER
TS	THERMOSTAT
W	WASH DOOR SWITCH
WFSW	WASH TANK FLOAT SWITCH
WV	WASH FILL VALVE

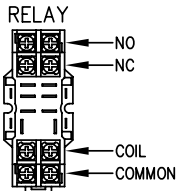
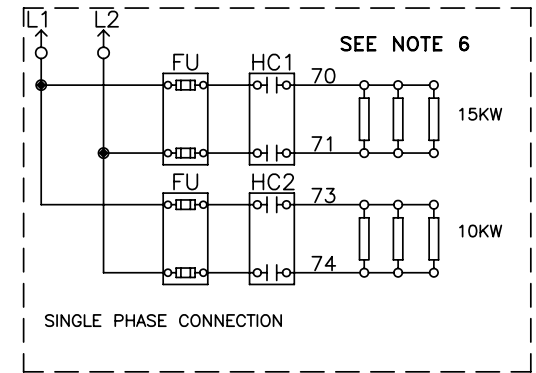
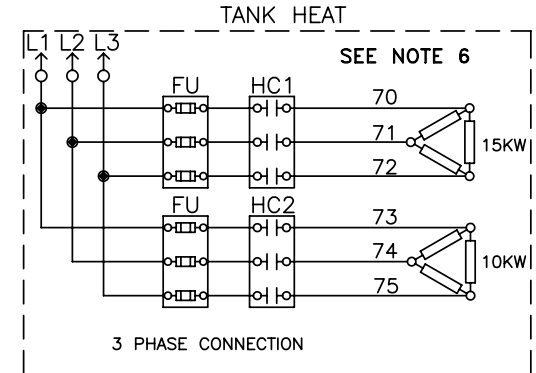
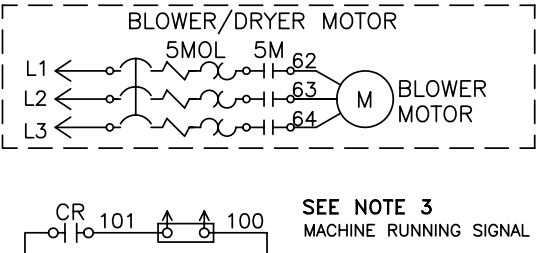
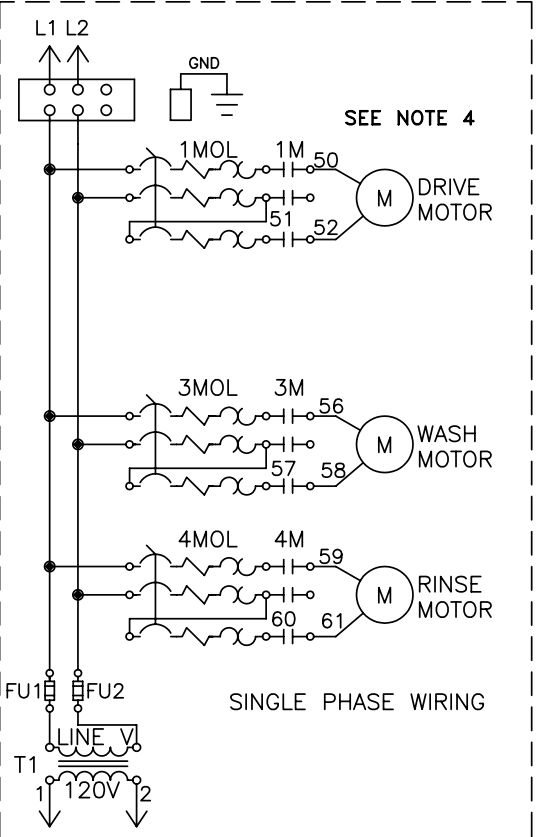
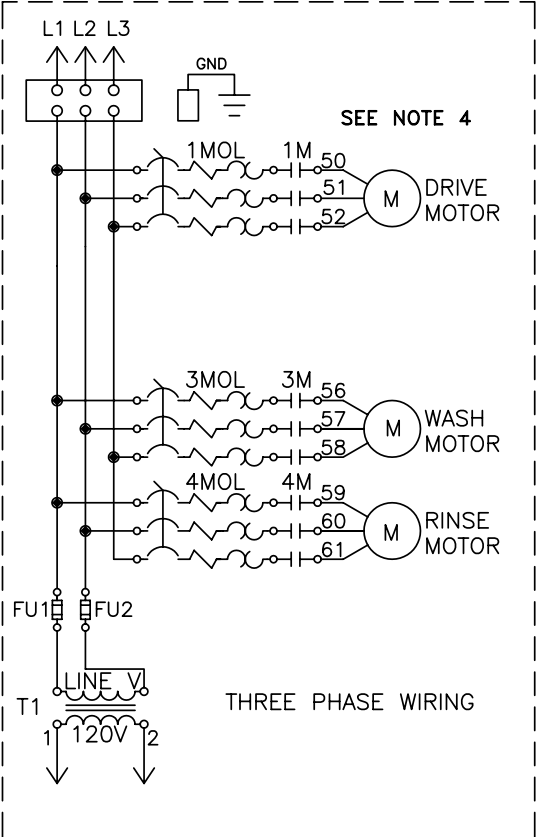
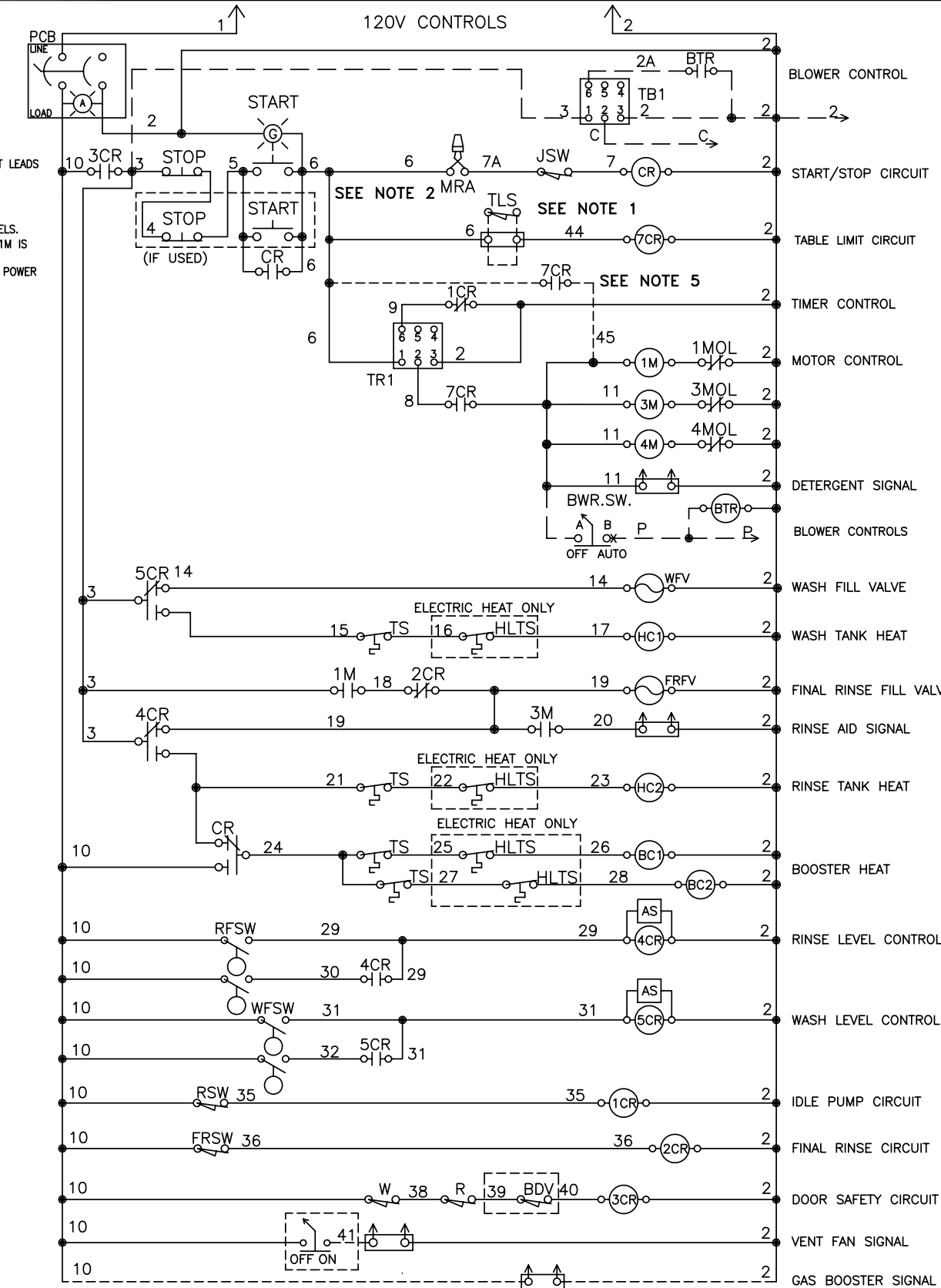


DIAGRAM STATE  
POWER OFF  
DOORS CLOSED  
TANKS EMPTY



CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/HZ, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR.BY J.MCALLISTER	SCALE	NONE	
DATE 24OCT03	SHEET 1	OF 1	

REV.	DESCRIPTION	DATE	BY
A	REVISED NOTES TO INCLUDE TLS WIRE LOCATION	14JUN04	JAM
B	ADDED NOTE 5 ADDED WIRING FOR SIDeloader	27SEP04	JAM
C	MOVED TABLE LIMIT SWITCH CIRCUIT	02DEC04	JAM

REV.	DESCRIPTION	DATE	BY
D	MODIFIED BLOWER CONTROLS, MRA CIRCUIT, NOTES 1 AND 2	08JUL06	JAM
E	MODIFIED BLOWER CONTROLS	8DEC06	JAM

Champion

The Dishwashing Machine Specialists

TWO TANK RACK CONVEYOR  
STEAM/ELECTRIC HEAT

B 701827 REV. E

MODELS COVERED BY THIS DRAWING	
66 PW	80 LT HDPW
70 FFPW	76 PW
80 HDPW	80 FFPW
66 LT PW	90 HDPW
70 LT FFPW	

NOTES:

- WHEN TABLE LIMIT SWITCH IS USED REMOVE JUMPER AND CONNECT LEADS BETWEEN WIRES 6 AND 44 ON TERMINAL BLOCK IN PANEL.
- WHEN AN MRA TABLE IS USED CONNECT MRA JAM SWITCH TO WIRES 6 AND 7A IN JUNCTION BOX ON FRONT OF MACHINE.
- USED FOR MACHINE RUNNING SIGNAL.
- DRIVE MOTOR CONNECTED SINGLE PHASE FOR 200-240 VOLT MODELS.
- ON MODELS WITH SIDE LOADER OPTION DRIVE MOTOR CONTACTOR 1M IS CONNECTED TO WIRE #45 INSTEAD OF WIRE #11.
- ON MODELS WITH MULTIPLE ELECTRIC CONNECTIONS, MAKE HEATER POWER CONNECTIONS AT THE HEATER FUSE BLOCK.

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
5CR	WASH FILL RELAY
6CR	PREWASH FILL RELAY
7CR	TABLE LIMIT SWITCH RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
2M	PREWASH MOTOR CONTACTOR
2MOL	PREWASH MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BDV	BLOWER DOOR SWITCH
BR	BOOSTER RELAY
BTR	BLOWER TIMER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CWTS	COLD WATER THERMOSTAT
CWV	COLD WATER VALVE
FRSW	FINAL RINSE SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONTACTOR/STEAM VALVE/ HOT WATER PUMP
HLTS	HIGH LIMIT THERMOSTAT
JSW	JAM SWITCH
PCB	POWER SWITCH/CIRCUIT BREAKER
PW	PREWASH DOOR SWITCH
PWFV	PREWASH FILL VALVE
PWFSW	PREWASH TANK FLOAT SWITCH
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TB1	BLOWER TIMER
TLS	TABLE LIMIT SWITCH
TR1	IDLE PUMP TIMER
TS	THERMOSTAT
W	WASH DOOR SWITCH
WFSW	WASH TANK FLOAT SWITCH

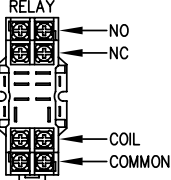
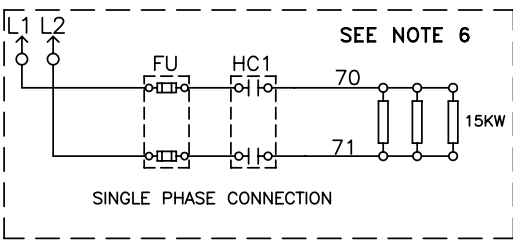
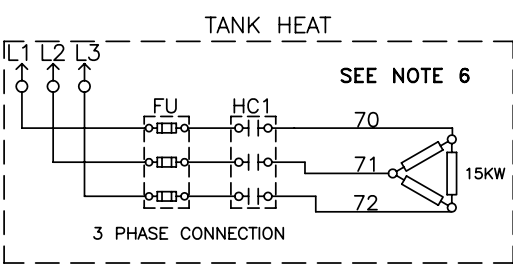
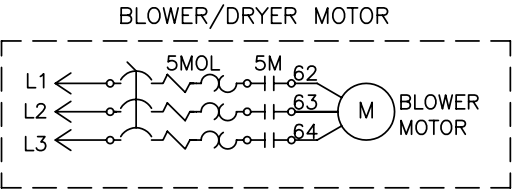
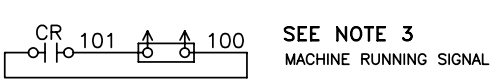
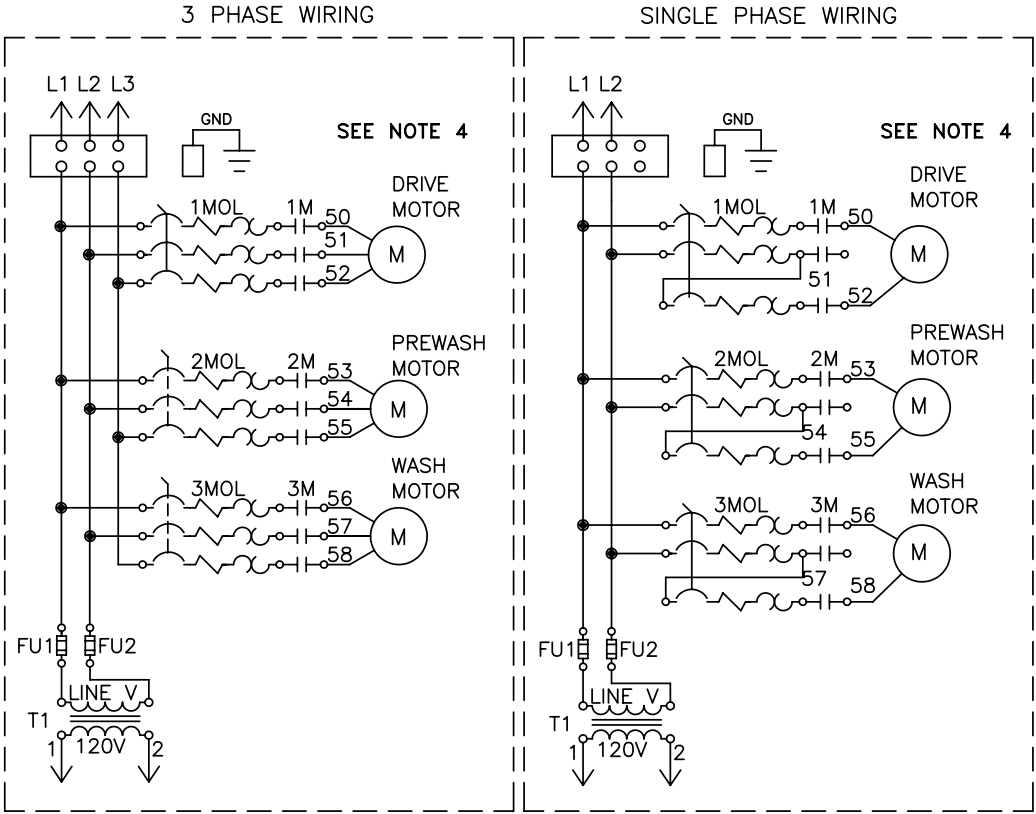
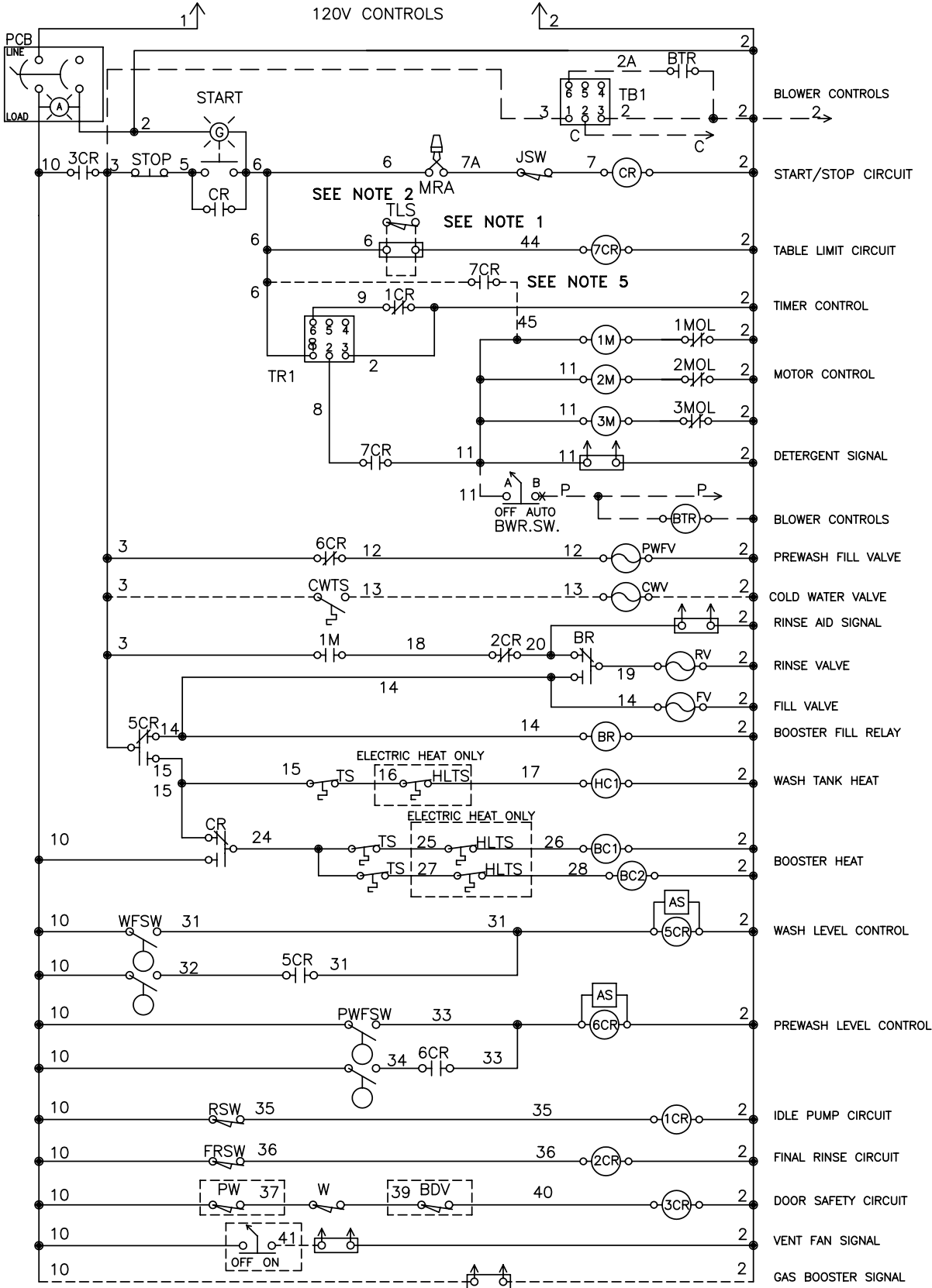


DIAGRAM STATE  
POWER OFF  
DOORS CLOSED  
TANKS EMPTY

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR. BY	J. MCALLISTER	SCALE	NONE
DATE	17OCT03	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
A	REVISED NOTES TO INCLUDE TLS WIRE LOCATION	14JUN04	JAM
B	ADDED NOTE 5 ADDED WIRING FOR SIDeloader	27SEP04	JAM
C	MOVED TABLE LIMIT CIRCUIT	1DEC04	JAM

REV.	DESCRIPTION	DATE	BY
D	MOVED CWTS AND PREWASH FILL CIRCUIT	5JAN05	JAM
E	MODIFIED BLOWER CONTROLS, MRA CONNECTIONS, NOTES 1 AND 2	08AUG06	JAM
F	MODIFIED BLOWER CONTROLS, ADDED BTR RELAY	20OCT06	JAM

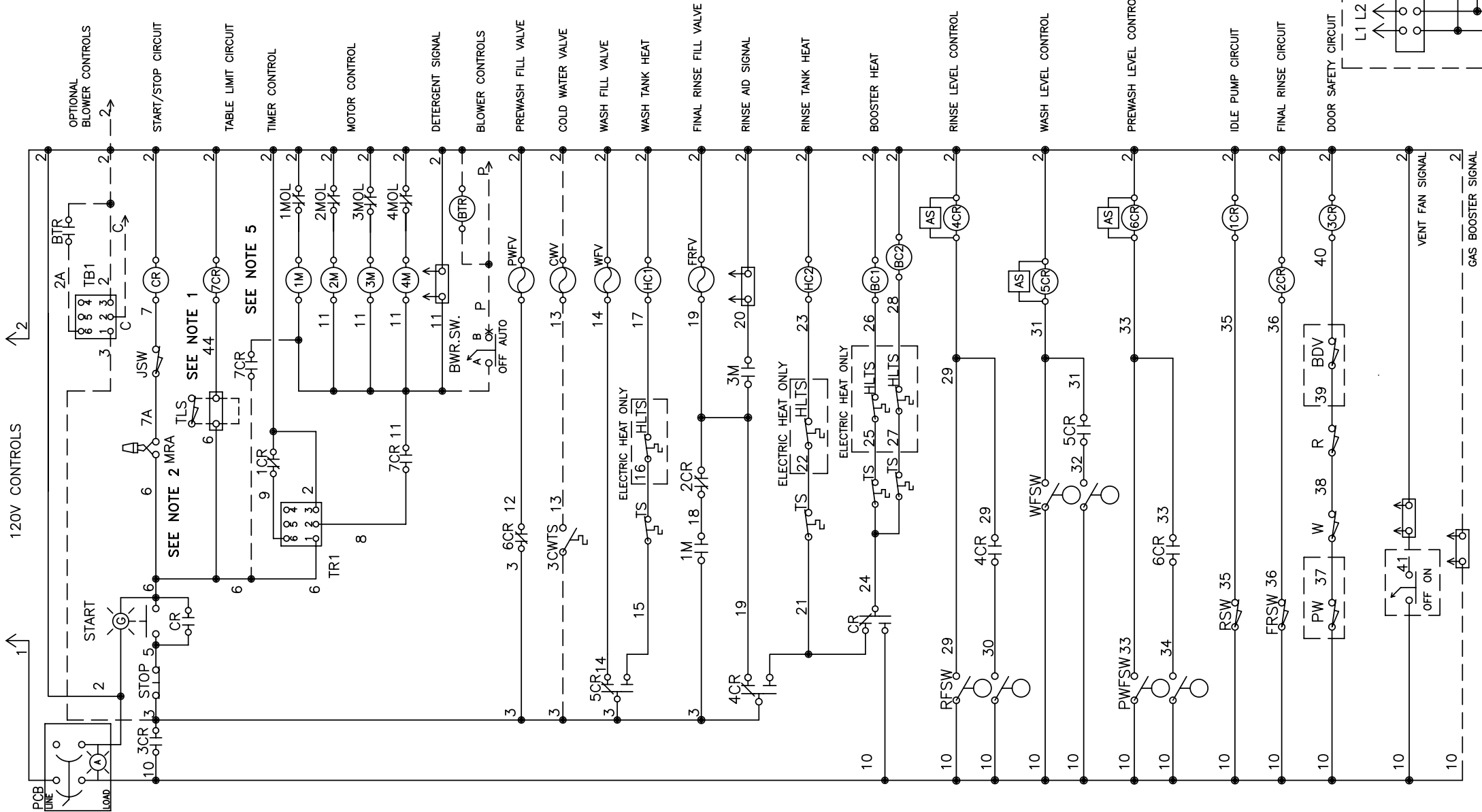
<div> <div>Champion</div> <div>The Dishwashing Machine Specialists</div> </div>		SINGLE TANK RACK CONVEYOR WITH PREWASH, STEAM/ELECTRIC/HOT WATER HEAT	
		B	701831
		REV.	F

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/HZ, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR. BY:	J.MCALLISTER	SCALE:	NONE
DATE:	170CT03	SHEET	1 OF 1

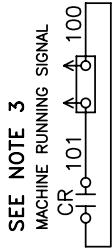
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F	REVISED BLOWER CONTROLS, MRA CONNECTION, NOTES 1 AND 2	25JULY06	JAM
G	REVISED BLOWER CONTROLS, ADDED BTR RELAY	20OCT06	JAM

REV.	DESCRIPTION	DATE	BY

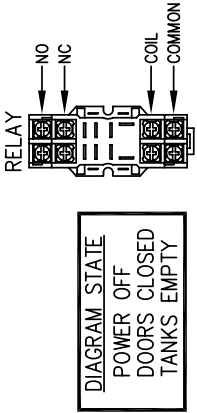
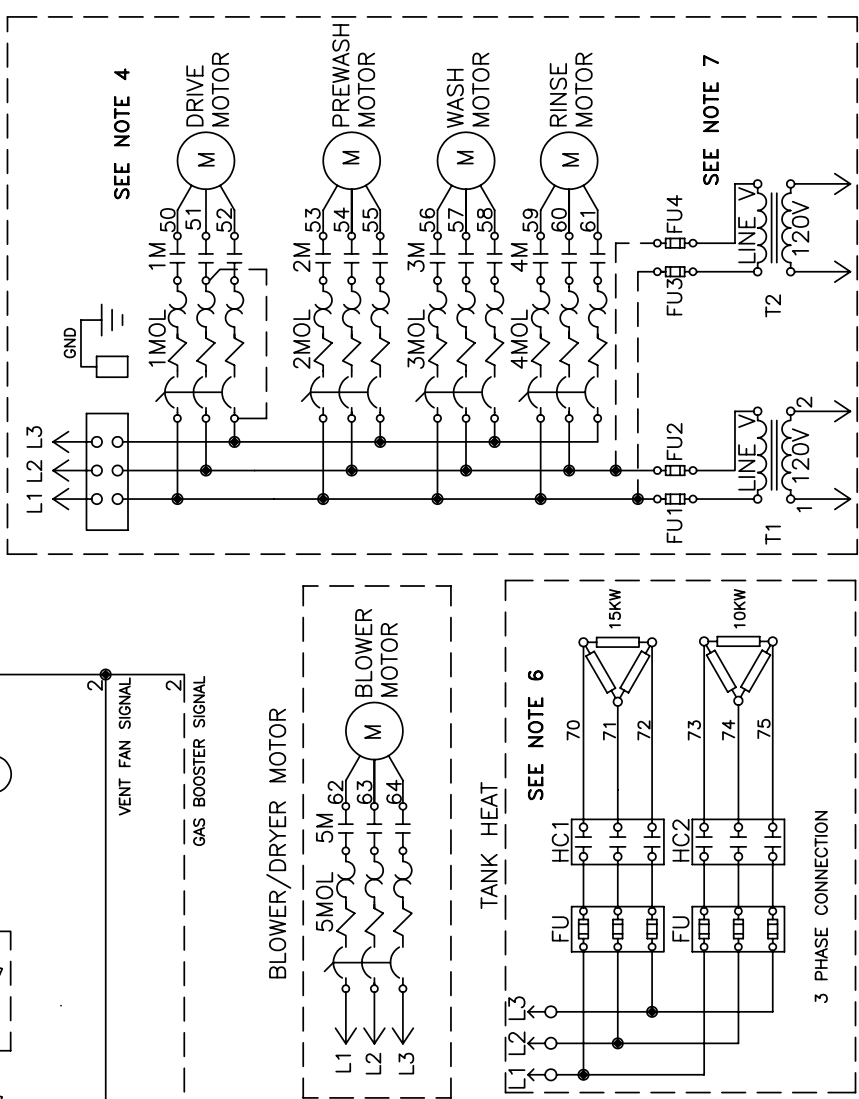
<b>Champion</b> The Dishwashing Machine Specialists		TWO TANK RACK CONVEYOR WITH PREWASH, STEAM/ELECTRIC HEAT	
B	701834	REV.	G



MODELS COVERED BY THIS DRAWING	
86 PW	108 HDPW
90 FFPW	106 PW
100 HDPW	110 FFPW
94 PW	120 HDPW
98 FFPW	



1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	RINSE FILL RELAY
5CR	WASH FILL RELAY
6CR	PREWASH FILL RELAY
7CR	TABLE LIMIT SWITCH RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
2M	PREWASH MOTOR CONTACTOR
2MOL	PREWASH MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
4M	RINSE MOTOR CONTACTOR
4MOL	RINSE MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BDV	BLOWER DOOR SWITCH
BTR	BLOWER TIMER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CWTS	COLD WATER THERMOSTAT
CWV	COLD WATER VALVE
FRSW	FINAL RINSE SWITCH
FU	FUSE/FUSE BLOCK
FRFV	FINAL RINSE FILL VALVE
FRSW	FINAL RINSE SWITCH
HC-	HEAT CONTACTOR/STEAM VALVE
HLTS	HIGH LIMIT THERMOSTAT
JSW	JAM SWITCH
PCB	POWER SWITCH/CIRCUIT BREAKER
PW	PREWASH DOOR SWITCH
PWFV	PREWASH FILL VALVE
PWFSW	PREWASH FLOAT SWITCH
R	RINSE DOOR SWITCH
RFSW	RINSE TANK FLOAT SWITCH
RSW	RACK SWITCH
T1	CONTROL TRANSFORMER
TB1	BLOWER TIMER
TLS	TABLE LIMIT SWITCH
TR1	IDLE PUMP TIMER
TS	THERMOSTAT
W	WASH DOOR SWITCH
WFSW	WASH TANK FLOAT SWITCH
WV	WASH FILL VALVE



- NOTES:
1. WHEN TABLE LIMIT SWITCH IS USED REMOVE JUMPER AND CONNECT LEADS BETWEEN WIRES 6 AND 44 ON TERMINAL BLOCK IN PANEL.
  2. WHEN AN MRA TABLE IS USED CONNECT MRA JAM SWITCH TO WIRES 6 AND 74 IN JUNCTION BOX ON FRONT OF MACHINE.
  3. DRIVE MOTOR CONNECTED SINGLE PHASE FOR 200-240 VOLT MODELS.
  4. ON MODELS WITH SIDE LOADER OPTION DRIVE MOTOR CONTACTOR 1M IS CONNECTED TO WIRE #45 INSTEAD OF WIRE #11.
  5. ON MODELS WITH MULTIPLE ELECTRIC CONNECTIONS, MAKE HEATER POWER CONNECTIONS AT THE HEATER FUSE BLOCK.
  6. T2 IS ON MRA TABLE FOR IKEA MACHINES.

MODELS COVERED BY THIS DRAWING

44 WS	70 WS FFPW
66 WS PW	80 WS HDPW

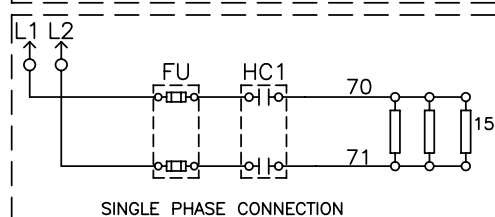
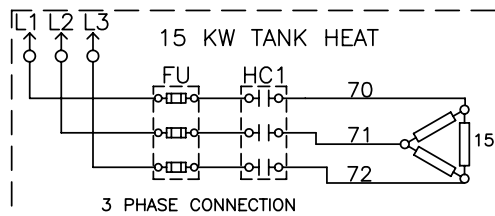
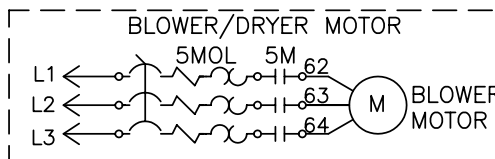
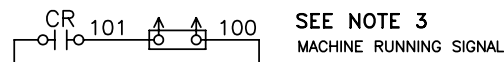
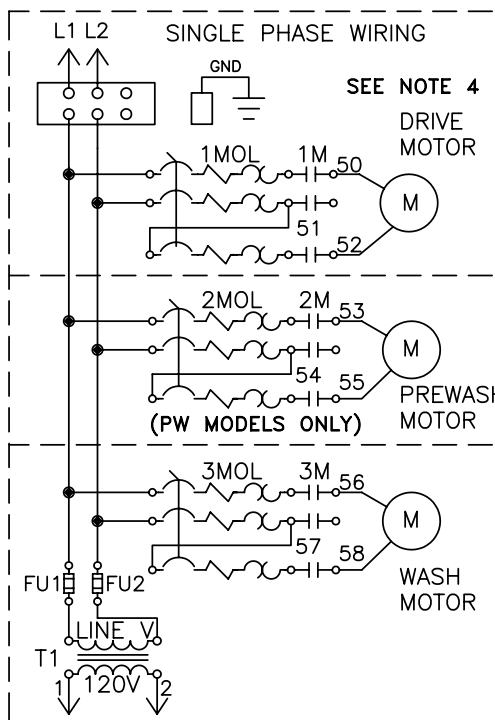
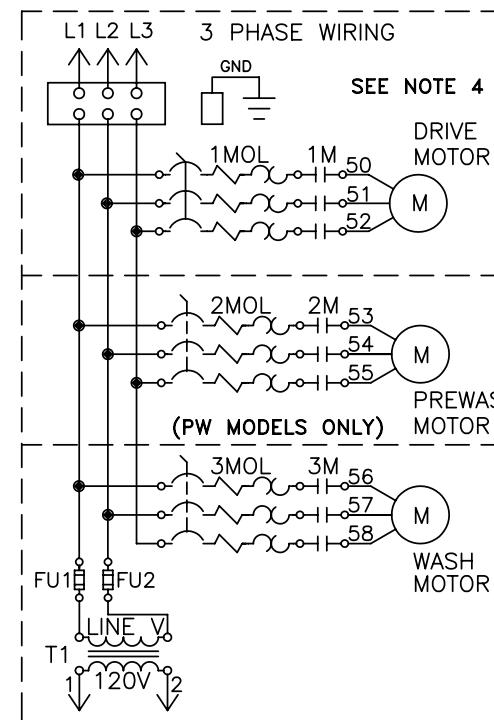
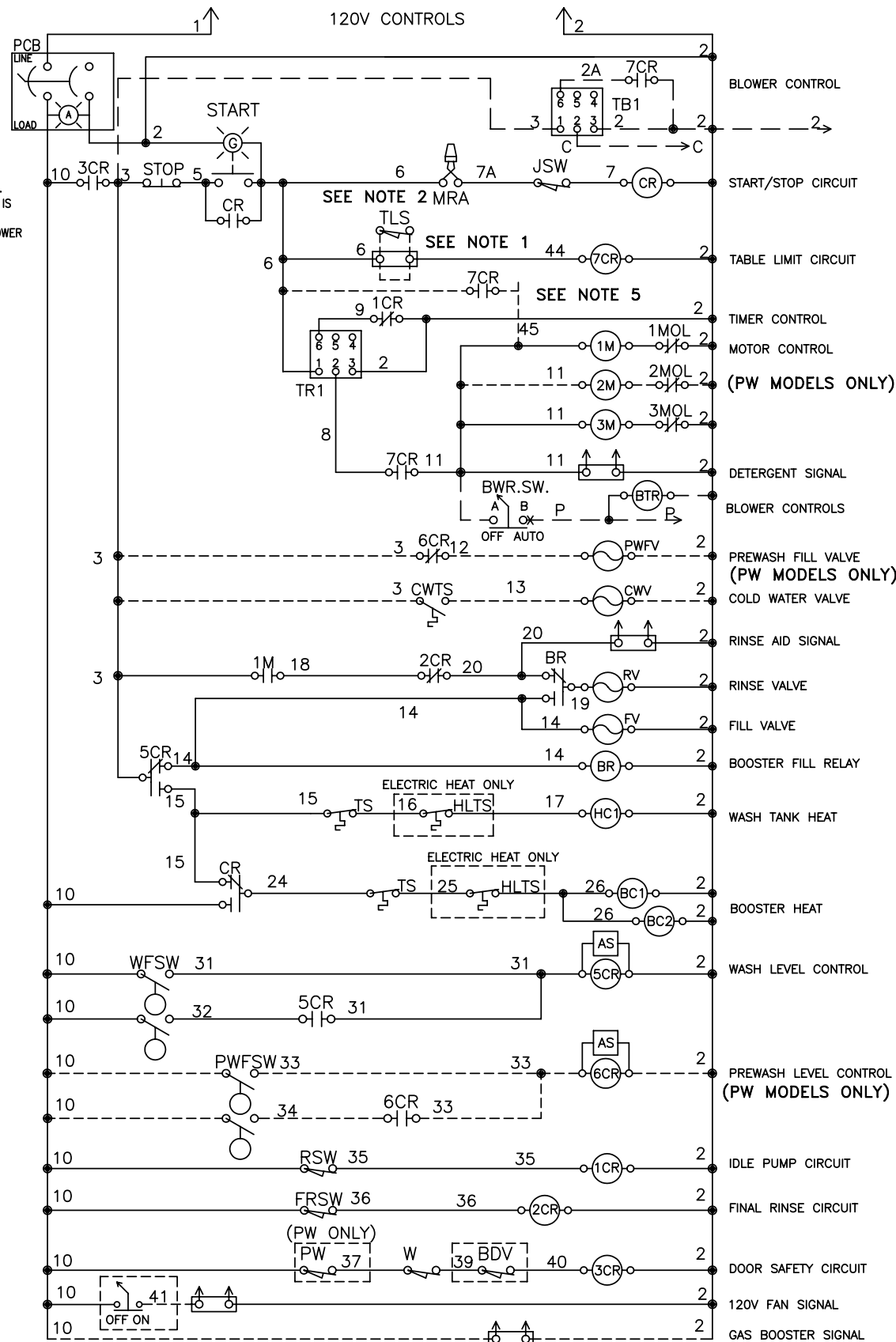
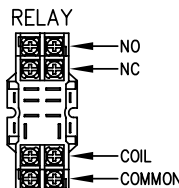
NOTES:

1. WHEN TABLE LIMIT SWITCH IS USED REMOVE JUMPER AND CONNECT LEADS BETWEEN WIRES 6 AND 44 ON TERMINAL BLOCK IN PANEL.
2. WHEN AN MRA TABLE IS USED CONNECT MRA JAM SWITCH TO WIRES 6 AND 7A IN JUNCTION BOX ON FRONT OF MACHINE.
3. USED FOR MACHINE RUNNING SIGNAL.
4. DRIVE MOTOR CONNECTED SINGLE PHASE FOR 200-240 VOLT MODELS.
5. ON MODELS WITH SIDE LOADER OPTION DRIVE MOTOR CONTACTOR 1M IS CONNECTED TO WIRE #45 INSTEAD OF WIRE #11.
6. ON MODELS WITH MULTIPLE ELECTRIC CONNECTIONS, MAKE HEATER POWER CONNECTIONS AT THE HEATER FUSE BLOCK.

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
5CR	WASH FILL RELAY
6CR	PREWASH FILL RELAY
7CR	TABLE LIMIT SWITCH RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
2M	PREWASH MOTOR CONTACTOR
2MOL	PREWASH MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BDV	BLOWER DOOR SWITCH
BR	BOOSTER RELAY
BTR	BLOWER TIMER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CWTS	COLD WATER THERMOSTAT
CWV	COLD WATER VALVE
FRSW	FINAL RINSE SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONT./STM VALVE/CIRC PUMP
HLTS	HIGH LIMIT THERMOSTAT
JSW	JAM SWITCH
PCB	POWER SWITCH/CIRCUIT BREAKER
PW	PREWASH DOOR SWITCH
PWFSW	PREWASH FLOAT SWITCH
PWFV	PREWASH FILL VALVE
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TB1	BLOWER TIMER
TLS	TABLE LIMIT SWITCH
TR1	IDLE PUMP TIMER
TS	THERMOSTAT
W	WASH DOOR SWITCH
WFSW	WASH TANK FLOAT SWITCH

DIAGRAM STATE

POWER OFF  
DOORS CLOSED  
TANKS EMPTY



CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/HZ, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.	DR. BY	J. MCALLISTER	SCALE	NONE
DATE	10FEB04	SHEET	1	OF 1

REV.	DESCRIPTION	DATE	BY
A	REVISED NOTES TO INCLUDE TLS WIRE LOCATION	14JUN04	JAM
B	ADDED NOTE 5 ADDED WIRING FOR SIDeloader	27SEP04	JAM
C	MOVED TABLE LIMIT SWITCH CIRCUIT	02DEC04	JAM

REV.	DESCRIPTION	DATE	BY
D	MOVED CWTS AND PREWASH FILL VALVE	10JAN05	JAM
E	MODIFIED BLOWER CONTROLS, MRA CONNECTIONS, NOTES 1 AND 2	11AUG06	JAM
F	MODIFIED BLOWER CONTROLS	8DEC06	JAM

**Champion**

The Dishwashing Machine Specialists

RACK CONVEYOR, WATER SAVER  
STEAM/ELECTRIC HEAT

B 701843 REV. F

✱✱

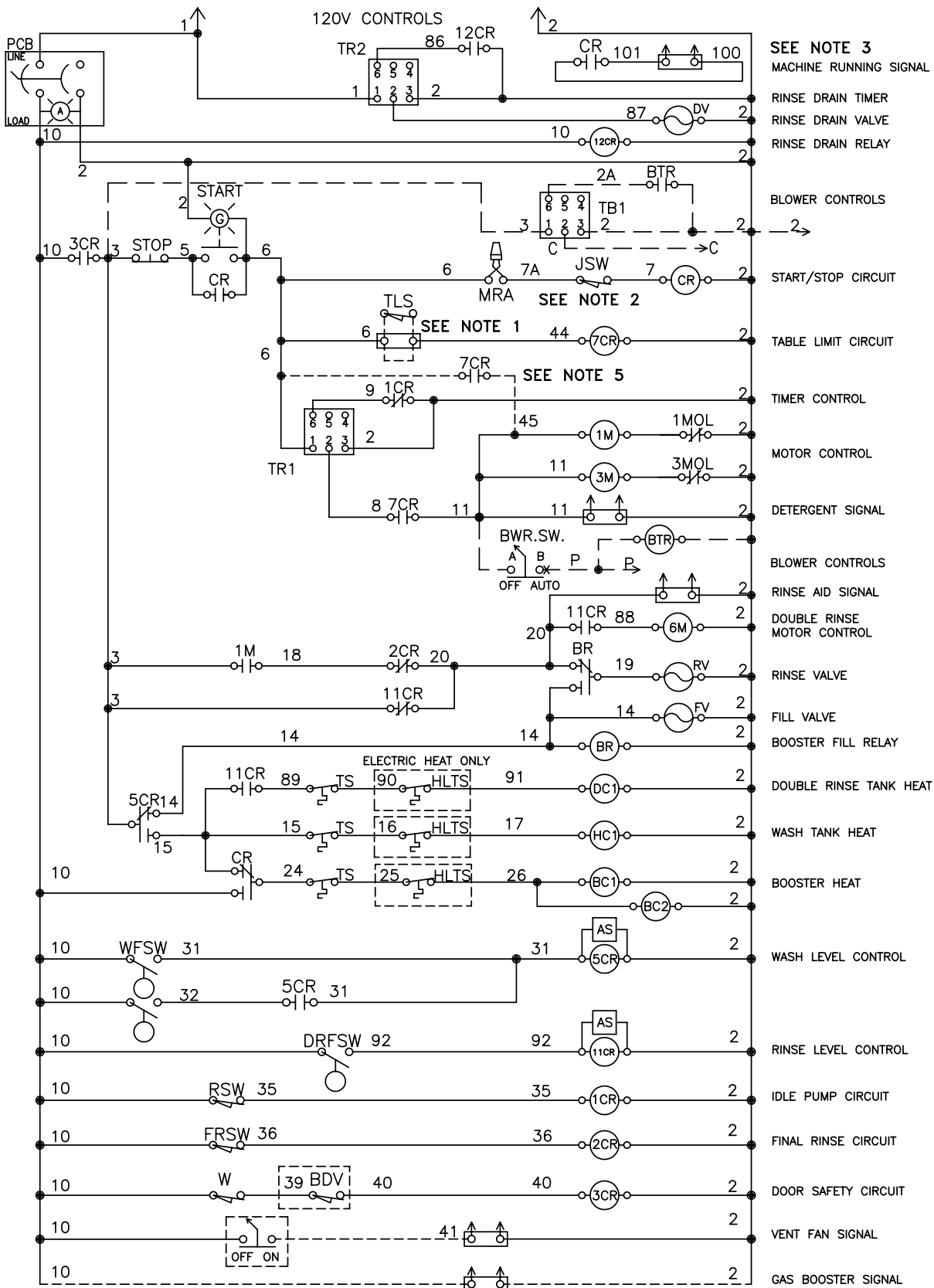
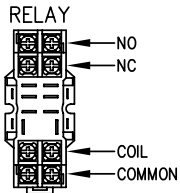
MODELS COVERED BY THIS DRAWING	
44DR	
44DRWS	

NOTES:

- WHEN TABLE LIMIT SWITCH IS USED REMOVE JUMPER AND CONNECT LEADS BETWEEN WIRES 6 AND 44 ON TERMINAL BLOCK IN PANEL.
- WHEN AN MRA TABLE IS USED CONNECT MRA JAM SWITCH TO WIRES 6 AND 7A IN JUNCTION BOX ON FRONT OF MACHINE.
- USED FOR MACHINE RUNNING SIGNAL.
- DRIVE MOTOR CONNECTED SINGLE PHASE FOR 200-240 VOLT MODELS.
- ON MODELS WITH SIDE LOADER OPTION DRIVE MOTOR CONTACTOR 1M IS CONNECTED TO WIRE #45 INSTEAD OF WIRE #11.
- ON MODELS WITH MULTIPLE ELECTRIC CONNECTIONS, MAKE HEATER POWER CONNECTIONS AT THE HEATER FUSE BLOCK.

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
5CR	WASH FILL RELAY
7CR	TABLE LIMIT SWITCH RELAY
11CR	DOUBLE RINSE FILL RELAY
12CR	DRAIN CONTROL RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
6M	DOUBLE RINSE MOTOR RELAY
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BDV	BLOWER DOOR SWITCH
BR	BOOSTER RELAY
BTR	BLOWER TIMER RELAY
CR	HOLD-IN RELAY
DC1	DOUBLE RINSE HEATER CONTACTOR
DV	DRAIN VALVE
DRFSW	DOUBLE RINSE TANK FLOAT SWITCH
FRSW	FINAL RINSE SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONTACTOR/STEAM VALVE
HLTS	HIGH LIMIT THERMOSTAT
JSW	JAM SWITCH
PCB	POWER SWITCH/CIRCUIT BREAKER
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
T2	DR MOTOR TRANSFORMER
TB1	BLOWER TIMER
TLS	TABLE LIMIT SWITCH
TR1	IDLE PUMP TIMER
TR2	DRAIN VALVE TIMER
TS	THERMOSTAT
W	WASH DOOR SWITCH
WFSW	WASH TANK FLOAT SWITCH

DIAGRAM STATE  
POWER OFF  
DOORS CLOSED  
TANKS EMPTY



SEE NOTE 3  
MACHINE RUNNING SIGNAL

RINSE DRAIN TIMER  
RINSE DRAIN VALVE  
RINSE DRAIN RELAY

BLOWER CONTROLS

START/STOP CIRCUIT

TABLE LIMIT CIRCUIT

TIMER CONTROL

MOTOR CONTROL

DETERGENT SIGNAL

BLOWER CONTROLS

RINSE AID SIGNAL  
DOUBLE RINSE MOTOR CONTROL

RINSE VALVE

FILL VALVE

BOOSTER FILL RELAY

DOUBLE RINSE TANK HEAT

WASH TANK HEAT

BOOSTER HEAT

WASH LEVEL CONTROL

RINSE LEVEL CONTROL

IDLE PUMP CIRCUIT

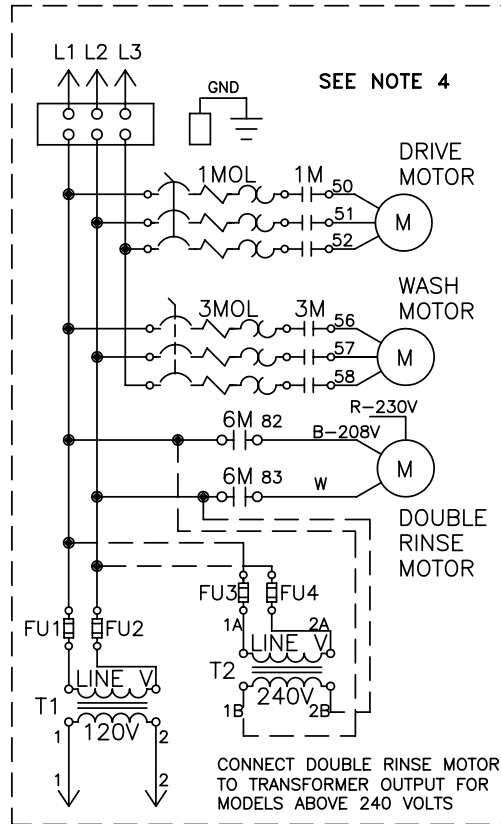
FINAL RINSE CIRCUIT

DOOR SAFETY CIRCUIT

VENT FAN SIGNAL

GAS BOOSTER SIGNAL

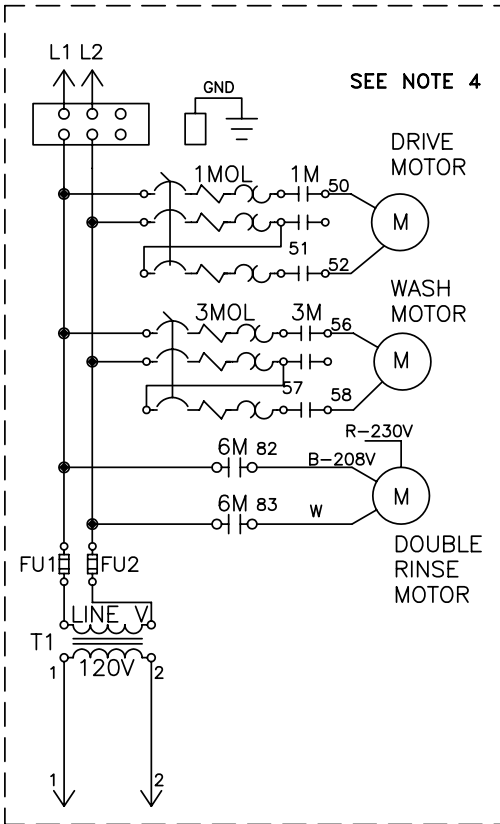
3 PHASE WIRING



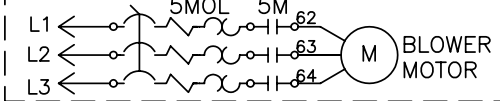
SEE DRAWING 114039 FOR  
BOOSTER HEATER WIRING

SEE DRAWING 114123 FOR  
WS BOOSTER HEATER WIRING

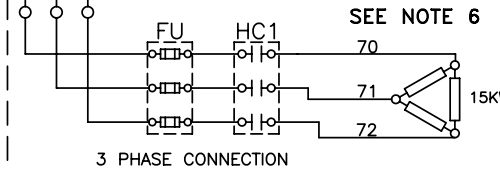
SINGLE PHASE WIRING



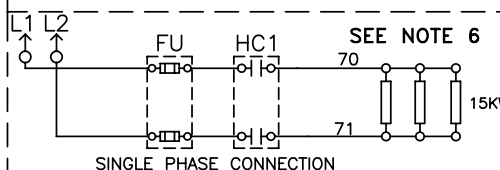
BLOWER/DRYER MOTOR



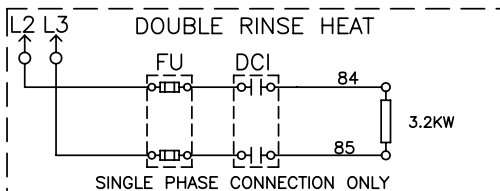
TANK HEAT



3 PHASE CONNECTION



SINGLE PHASE CONNECTION



SINGLE PHASE CONNECTION ONLY

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR. BY	J.MCALLISTER	SCALE	NONE
DATE	07SEP04	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
A	ADDED WS MODEL TO DRAWING	14JUN05	JAM
B	CHANGED DRAIN VALVE TIMER CIRCUIT	3FEB06	JAM
C	MODIFIED BLOWER CONTROLS, MRA CONNECTIONS, NOTES 1 AND 2	15AUG06	JAM

REV.	DESCRIPTION	DATE	BY
D	MODIFIED BLOWER CONTROLS	8DEC06	JAM

**Champion**

The Dishwashing Machine Specialists

SINGLE TANK RACK CONVEYOR  
DOUBLE RINSE STEAM/ELECTRIC HEAT

B 701912

REV. D

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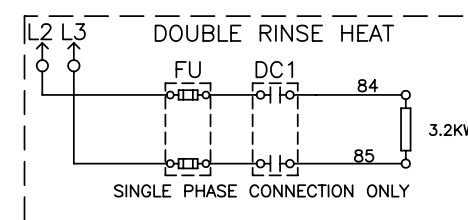
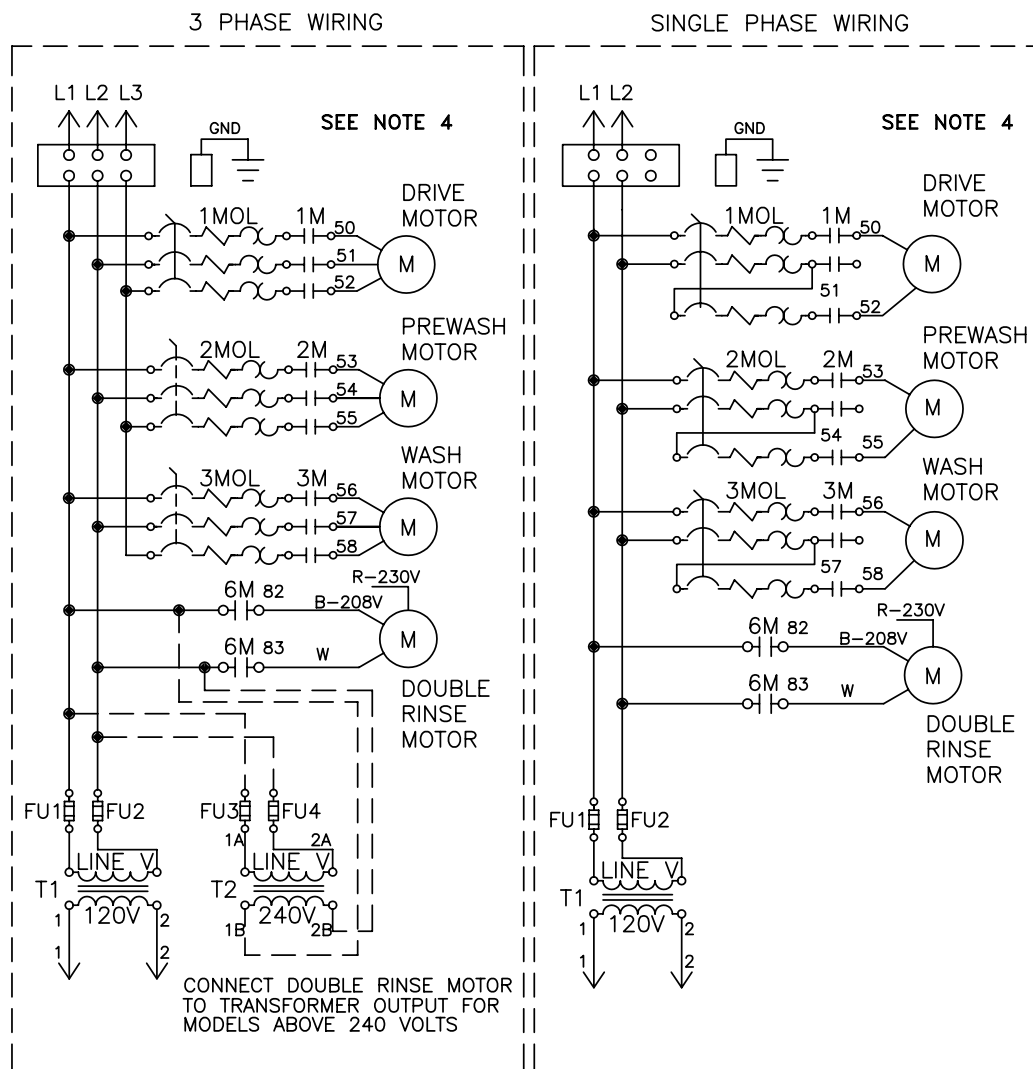
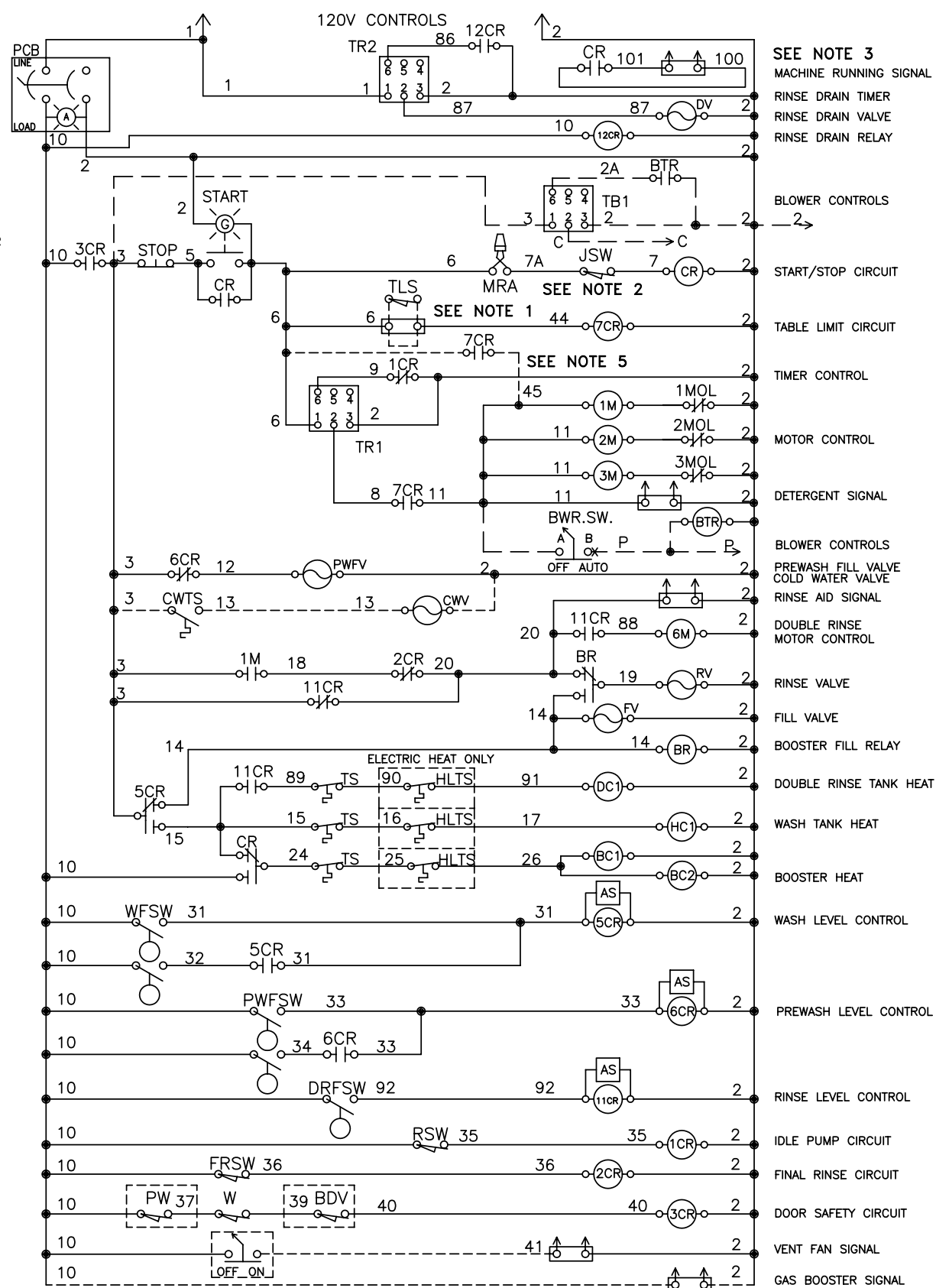


MODELS COVERED BY THIS DRAWING	
66DRPW	66DRWSPW
70DRFFPW	70DRWSFFPW
80DRHDPW	80DRWSHDPW

**NOTES:**

1. WHEN TABLE LIMIT SWITCH IS USED REMOVE JUMPER AND CONNECT LEADS BETWEEN WIRES 6 AND 44 ON TERMINAL BLOCK IN PANEL.
2. WHEN AN MRA TABLE IS USED CONNECT MRA JAM SWITCH TO WIRES 6 AND 7A IN JUNCTION BOX ON FRONT OF MACHINE.
3. USED FOR MACHINE RUNNING SIGNAL.
4. DRIVE MOTOR CONNECTED SINGLE PHASE FOR 200-240 VOLT MODELS.
5. ON MODELS WITH SIDE LOADER OPTION DRIVE MOTOR CONTACTOR 1M IS CONNECTED TO WIRE #45 INSTEAD OF WIRE #11.
6. ON MODELS WITH MULTIPLE ELECTRIC CONNECTIONS, MAKE HEATER POWER CONNECTIONS AT THE HEATER FUSE BLOCK.

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
5CR	WASH FILL RELAY
6CR	PREWASH FILL RELAY
7CR	TABLE LIMIT SWITCH RELAY
11CR	DOUBLE RINSE FILL RELAY
12CR	DRAIN CONTROL RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
2M	PREWASH MOTOR CONTACTOR
2MOL	PREWASH MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
6M	DOUBLE RINSE MOTOR RELAY
AS	ARC SUPPRESSOR
BC—	BOOSTER CONTACTOR/STEAM VALVE
BDV	BLOWER DOOR SWITCH
BR	BOOSTER RELAY
BTR	BLOWER TIMER RELAY
BWR SW	BLOWER DRYER SWITCH
CR	HOLD-IN RELAY
CWV	COLD WATER VALVE
DC1	DOUBLE RINSE HEATER CONTACTOR
DV	DRAIN VALVE
DRFSW	DOUBLE RINSE TANK FLOAT SWITCH
FRSW	FINAL RINSE SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC—	HEAT CONTACTOR/STEAM VALVE
HLTS	HIGH LIMIT THERMOSTAT
JSW	JAM SWITCH
PCB	POWER SWITCH/CIRCUIT BREAKER
PWFSW	PREWASH TANK FLOAT SWITCH
PWV	PREWASH FILL VALVE
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
T2	DR MOTOR TRANSFORMER
TB1	BLOWER TIMER
TLS	TABLE LIMIT SWITCH
TR1	IDLE PUMP TIMER
TR2	DRAIN VALVE TIMER
TS	THERMOSTAT
W	WASH DOOR SWITCH
WFSW	WASH TANK FLOAT SWITCH



SEE DRAWING 114039 FOR  
BOOSTER HEATER WIRING

SEE DRAWING 114123 FOR  
WS BOOSTER HEATER WIRING

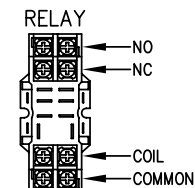
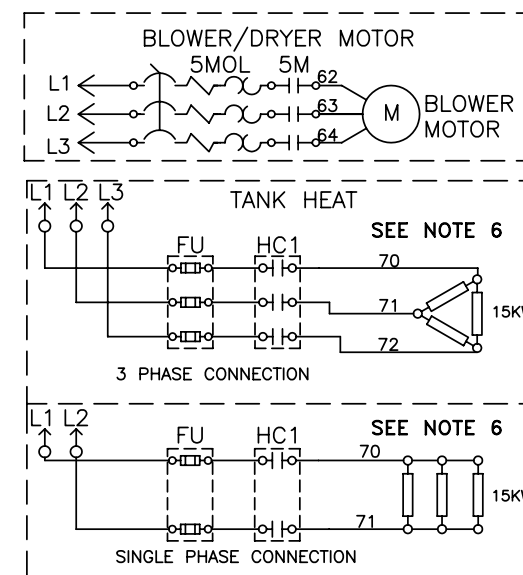


DIAGRAM STATE  
POWER OFF  
DOORS CLOSED  
TANKS EMPTY



CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/HZ, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR. BY	J. MCALLISTER	SCALE	NONE
DATE	23DEC04	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
A	CHANGED DRAIN VALVE TIMER CIRCUIT ADDED BLOWER SWITCH	14MAR06	JAM
B	MODIFIED BLOWER CONTROLS, MRA CONNECTION, NOTES 1 AND 2	15AUG06	JAM
C	MODIFIED BLOWER CONTROLS	8DEC06	JAM

REV.	DESCRIPTION	DATE	BY

# Champion

The Dishwashing Machine Specialists

SINGLE TANK RACK CONVEYOR WITH PREWASH  
DOUBLE RINSE STEAM/ELECTRIC HEAT

B	701913	REV.
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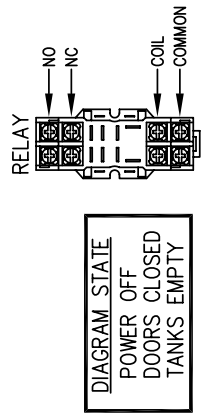
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REV.	DESCRIPTION	DATE	BY
A	MOVED TABLE LIMIT SWITCH CIRCUIT	02DEC04	JAM
B	MODIFIED BLOWER CONTROLS, MRA CONNECTIONS, NOTES 1 AND 2	15AUG06	JAM
C	MODIFIED BLOWER CONTROLS	8DEC06	JAM

# Champion

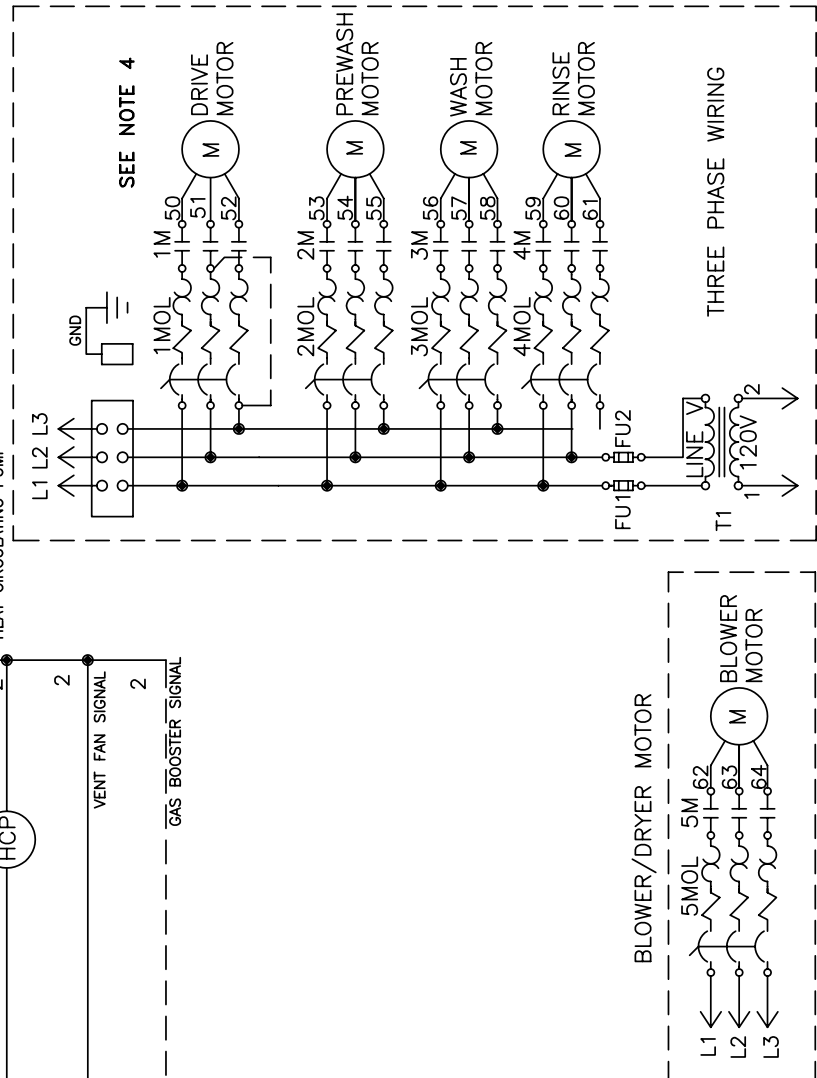
The Dishwashing Machine Specialists

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**NOTES:**

1. WHEN TABLE LIMIT SWITCH IS USED REMOVE JUMPER AND CONNECT LEADS BETWEEN WIRES 6 AND 44 ON TERMINAL BLOCK IN PANEL.
2. WHEN AN MPA TABLE IS USED, CONNECT MPA JAM SWITCH TO WIRES 6 AND 74 IN JUNCTION BOX ON FRONT OF MACHINE.
3. USED FOR MACHINE RUNNING SIGNAL.
4. DRIVE MOTOR CONNECTED SINGLE PHASE FOR 200-240 VOLT MODELS.
5. ON MODELS WITH SIDE LOADER OPTION DRIVE MOTOR CONTACTOR 1M IS CONNECTED TO WIRE #45 INSTEAD OF WIRE #11.



1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	RINSE FILL RELAY
5CR	WASH FILL RELAY
6CR	PREWASH FILL RELAY
7CR	TABLE LIMIT SWITCH RELAY
9CR	WASH HEAT RELAY
10CR	RINSE HEAT RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
2M	PREWASH MOTOR CONTACTOR
2MOL	PREWASH MOTOR OVERLOAD
3MOL	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
4M	RINSE MOTOR CONTACTOR
4MOL	RINSE MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	APC SUPPRESSOR
BDV	BLOWER DOOR SWITCH
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CWTS	COLD WATER THERMOSTAT
CWV	COLD WATER VALVE
FRSW	FINAL RINSE SWITCH
FU	FUSE/FUSE BLOCK
FRV	FINAL RINSE FILL VALVE
FRSW	FINAL RINSE SWITCH
HC-	HOT WATER VALVE
HCP	HEAT CIRCULATING PUMP
JSW	JAM SWITCH
PCB	POWER SWITCH/CIRCUIT BREAKER
PW	PREWASH DOOR SWITCH
PWFV	PREWASH FILL VALVE
PWFSW	PREWASH MOTOR SWITCH
R	RINSE DOOR SWITCH
RFWS	RINSE TANK FLOAT SWITCH
RSW	RACK SWITCH
T1	CONTROL TRANSFORMER
TB1	BLOWER TIMER
TLS	TABLE LIMIT SWITCH
TR1	IDLE PUMP TIMER
TS	THERMOSTAT
W	WASH DOOR SWITCH
WFSW	WASH TANK FLOAT SWITCH
WV	WASH FILL VALVE

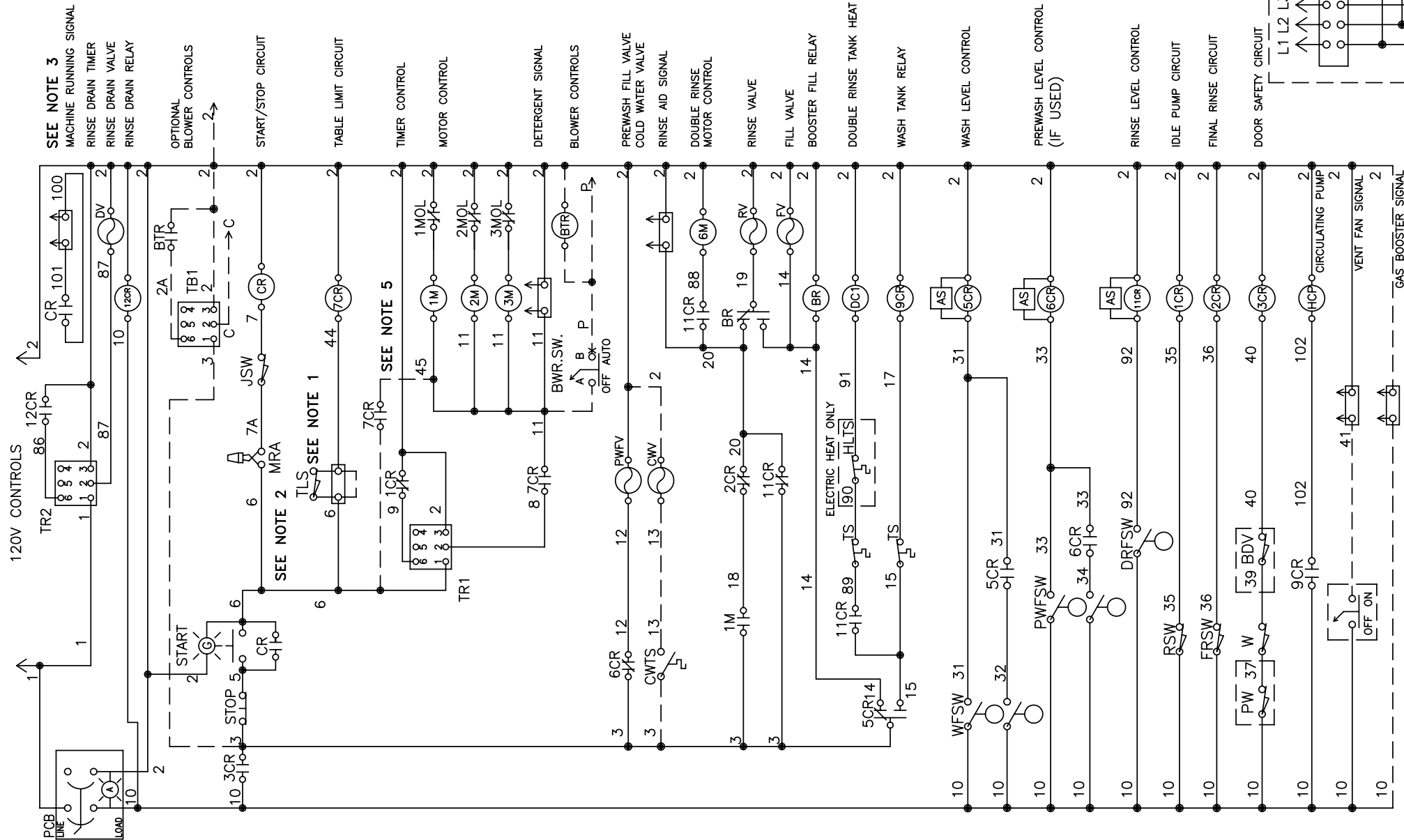
86 PW	108 HDPW
90 FFPW	106 PW
100 HDPW	110 FFPW
94 PW	120 HDPW
98 FFPW	

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR.BY	J.MCALLISTER	SCALE	NONE
DATE	05JAN05	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
A	CHANGED DRAIN VALVE TIMER CIRCUIT	14MAR06	JAM
B	MODIFIED BLOWER CONTROLS, MRA CONNECTIONS, NOTES 1 AND 2	16AUG06	JAM
C	MODIFIED BLOWER CONTROLS	12DEC06	JAM

REV.	DESCRIPTION	DATE	BY

<b>Champion</b> The Dishwashing Machine Specialists		SINGLE TANK RACK CONVEYOR, DOUBLE RINSE WITH/WITHOUT PREWASH, HOT WATER HEAT	
		B	701937 REV. C



1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
4CR	RINSE FILL RELAY
5CR	WASH FILL RELAY
6CR	PREWASH FILL RELAY
7CR	TABLE LIMIT SWITCH RELAY
9CR	WASH HEAT RELAY
11CR	DOUBLE RINSE FILL RELAY
12CR	RINSE DRAIN RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
2M	PREWASH MOTOR CONTACTOR
2MOL	PREWASH MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
6M	DOUBLE RINSE MOTOR RELAY
AS	ARC SUPPRESSOR
BDV	BLOWER DOOR SWITCH
BTR	BLOWER TIMER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CWTS	COLD WATER THERMOSTAT
CWV	COLD WATER VALVE
DC1	DOUBLE RINSE HEATER CONTACTOR
DV	RINSE DRAIN VALVE
FRSW	FINAL RINSE SWITCH
FU	FUSE/FUSE BLOCK
FRFV	FINAL RINSE FILL VALVE
FRSW	FINAL RINSE SWITCH
HCP	HEAT CIRCULATING PUMP
HLTS	HIGH LIMIT THERMOSTAT
JSW	JAM SWITCH
PCB	POWER SWITCH/CIRCUIT BREAKER
PW	PREWASH DOOR SWITCH
PWFV	PREWASH FILL VALVE
PWFSW	PREWASH FLOOR SWITCH
R	RINSE DOOR SWITCH
RFSW	RINSE TANK FLOAT SWITCH
RSW	RACK SWITCH
T1	CONTROL TRANSFORMER
T2	DR MOTOR TRANSFORMER
TB1	BLOWER TIMER
TLS	TABLE LIMIT SWITCH
TR1	IDLE PUMP TIMER
TR2	DRAIN VALVE TIMER
TS	THERMOSTAT
W	WASH DOOR SWITCH
WFSW	WASH TANK FLOAT SWITCH
WV	WASH FILL VALVE

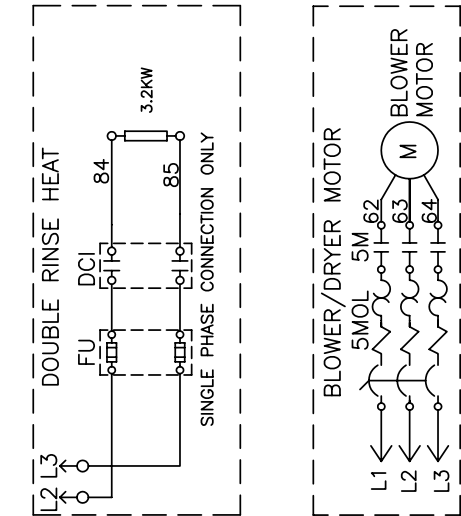
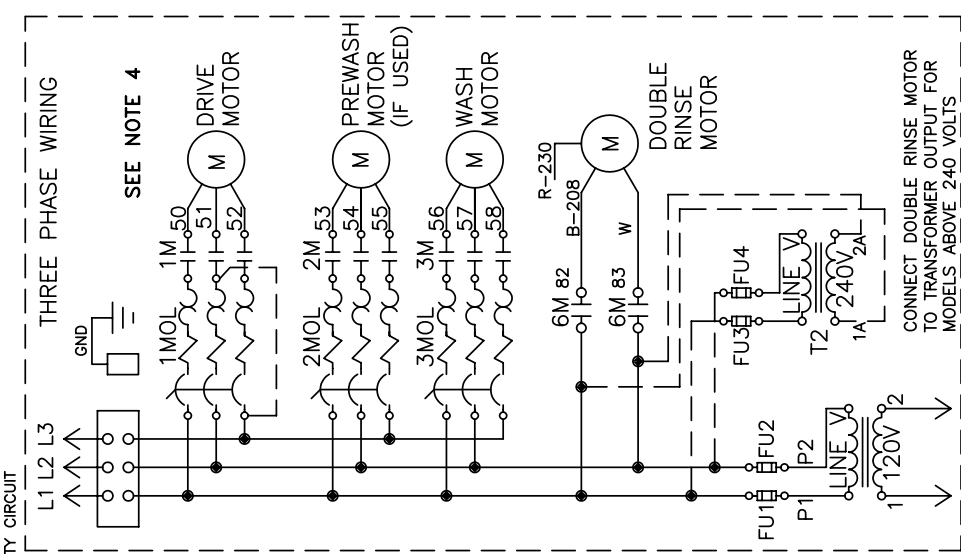


DIAGRAM STATE	
POWER OFF	NO
DOORS CLOSED	NC
TANKS FULL	COIL
TANKS EMPTY	COMMON

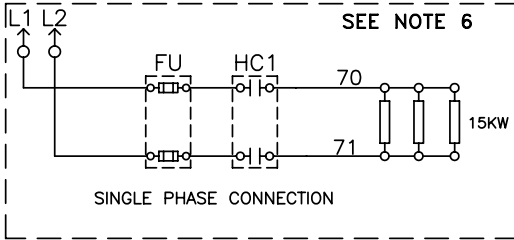
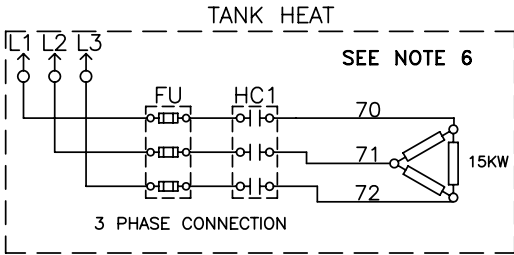
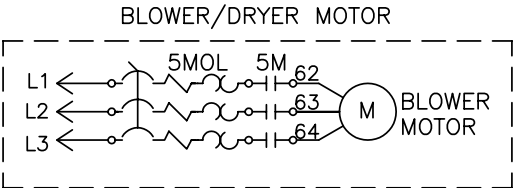
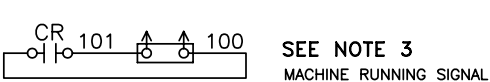
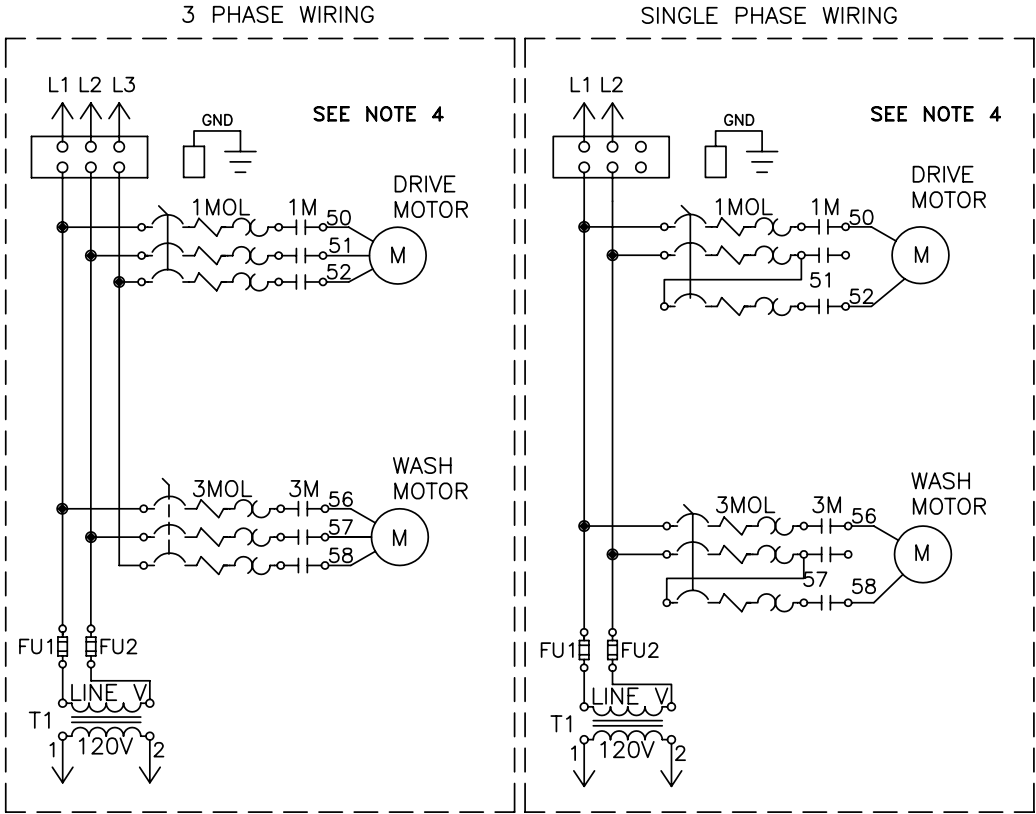
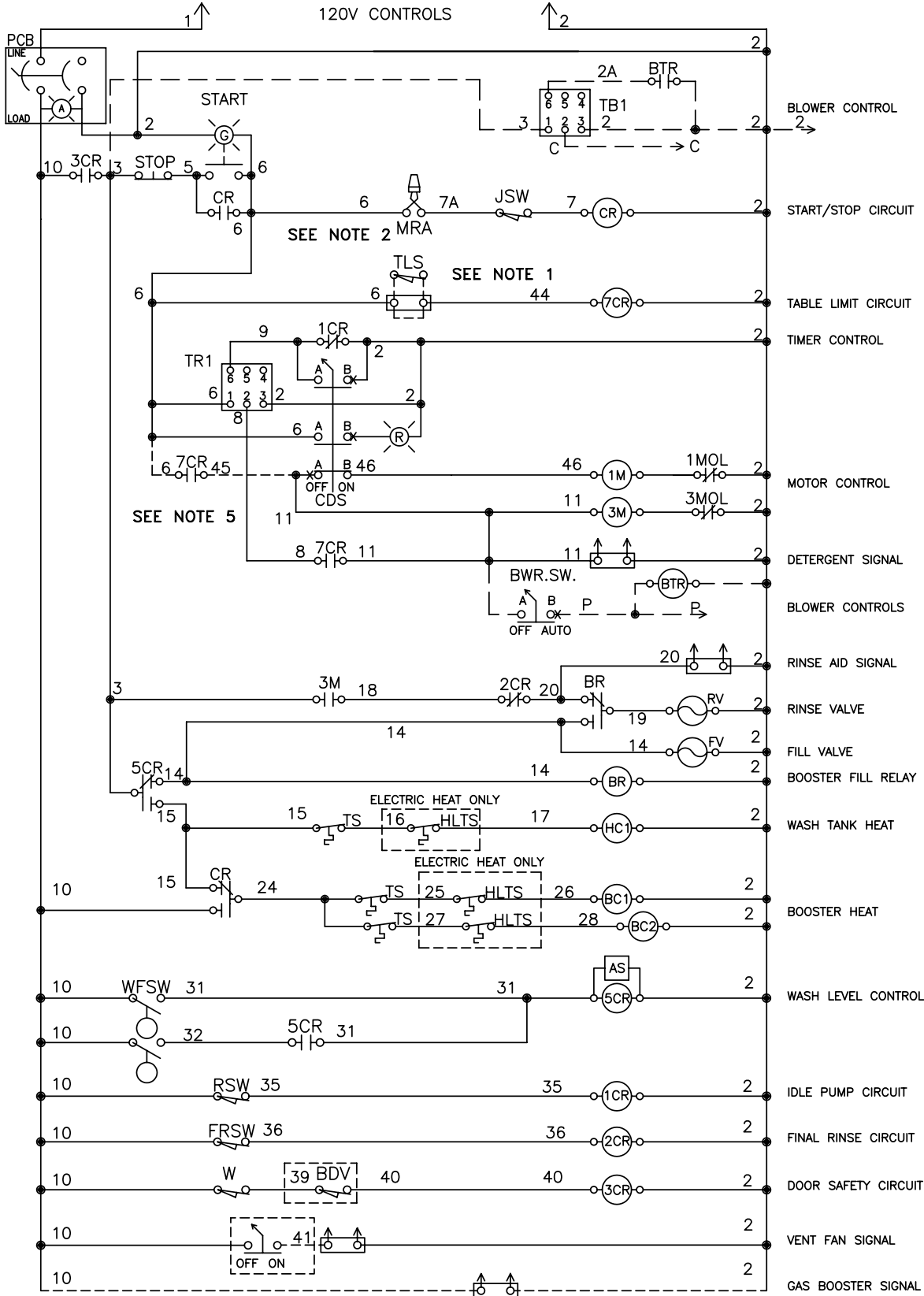
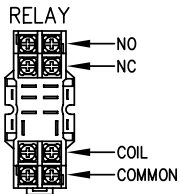
MODELS COVERED BY THIS DRAWING	
44	
44 LT	
54	

NOTES:

- WHEN TABLE LIMIT SWITCH IS USED REMOVE JUMPER AND CONNECT LEADS BETWEEN WIRES 6 AND 44 ON TERMINAL BLOCK IN PANEL.
- WHEN AN MRA TABLE IS USED CONNECT MRA JAM SWITCH TO WIRES 6 AND 7A IN JUNCTION BOX ON FRONT OF MACHINE.
- USED FOR MACHINE RUNNING SIGNAL.
- DRIVE MOTOR CONNECTED SINGLE PHASE FOR 200-240 VOLT MODELS.
- ON MODELS WITH SIDE LOADER OPTION CONVEYOR DWELL SWITCH IS CONNECTED TO WIRE #45 INSTEAD OF WIRE #11.
- ON MODELS WITH MULTIPLE ELECTRIC CONNECTIONS, MAKE HEATER POWER CONNECTIONS AT THE HEATER FUSE BLOCK.

1CR	RACK SWITCH RELAY
2CR	FINAL RINSE SWITCH RELAY
3CR	DOOR SAFETY SWITCH RELAY
5CR	WASH FILL RELAY
7CR	TABLE LIMIT SWITCH RELAY
1M	DRIVE MOTOR CONTACTOR
1MOL	DRIVE MOTOR OVERLOAD
3M	WASH MOTOR CONTACTOR
3MOL	WASH MOTOR OVERLOAD
5M	BLOWER MOTOR CONTACTOR
5MOL	BLOWER MOTOR OVERLOAD
AS	ARC SUPPRESSOR
BC-	BOOSTER CONTACTOR/STEAM VALVE
BDV	BLOWER DOOR SWITCH
BR	BOOSTER RELAY
BTR	BLOWER TIMER RELAY
BWR.SW.	BLOWER SWITCH
CR	HOLD-IN RELAY
CDS	CONVEYOR DWELL SWITCH
FRSW	FINAL RINSE SWITCH
FU	FUSE/FUSE BLOCK
FV	FILL VALVE
HC-	HEAT CONTACTOR/STEAM VALVE
HLTS	HIGH LIMIT THERMOSTAT
JSW	JAM SWITCH
PCB	POWER SWITCH/CIRCUIT BREAKER
RSW	RACK SWITCH
RV	RINSE VALVE
T1	CONTROL TRANSFORMER
TB1	BLOWER TIMER
TLS	TABLE LIMIT SWITCH
TR1	IDLE PUMP TIMER
TS	THERMOSTAT
W	WASH DOOR SWITCH
WFSW	WASH TANK FLOAT SWITCH

DIAGRAM STATE  
POWER OFF  
DOORS CLOSED  
TANKS EMPTY



CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/HZ, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR. BY	J. MCALLISTER	SCALE	NONE
DATE	04JAN05	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
A	MODIFIED BLOWER CONTROLS, MRA CONNECTIONS, NOTES 1 AND 2	17AUG06	JAM
B	MODIFIED BLOWER CONTROLS	12DEC06	JAM

REV.	DESCRIPTION	DATE	BY

**Champion**

The Dishwashing Machine Specialists

SINGLE TANK RACK CONVEYOR  
STEAM/ELECTRIC HEAT CONVEYOR DWELL

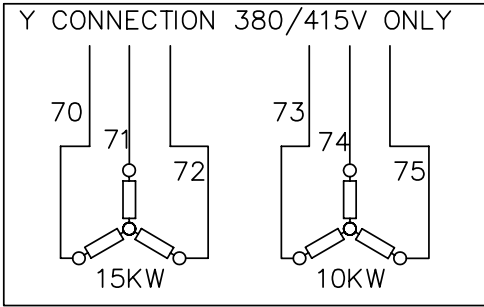
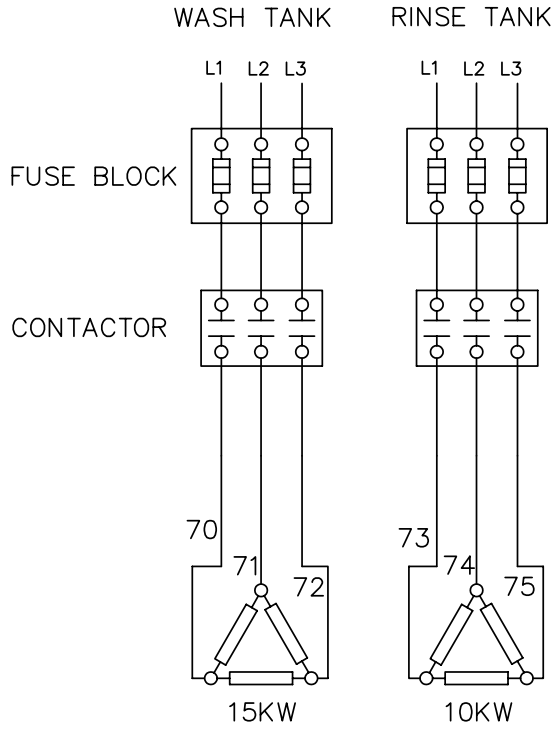
B 701938

REV. B

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E SERIES RACK MACHINE TANK HEATER CONNECTIONS

3 PHASE CONNECTION



VOLTAGE 200–220V	WASH	RINSE
KW/CONTACTOR	15KW	10KW
CONTACTOR RATING	60A	60A
FUSE RATING	50A	35A
WIRE SIZE	#8	#10

VOLTAGE 230–240V	WASH	RINSE
KW/CONTACTOR	15KW	10KW
CONTACTOR RATING	60A	60A
FUSE RATING	45A	30A
WIRE SIZE	#8	#10

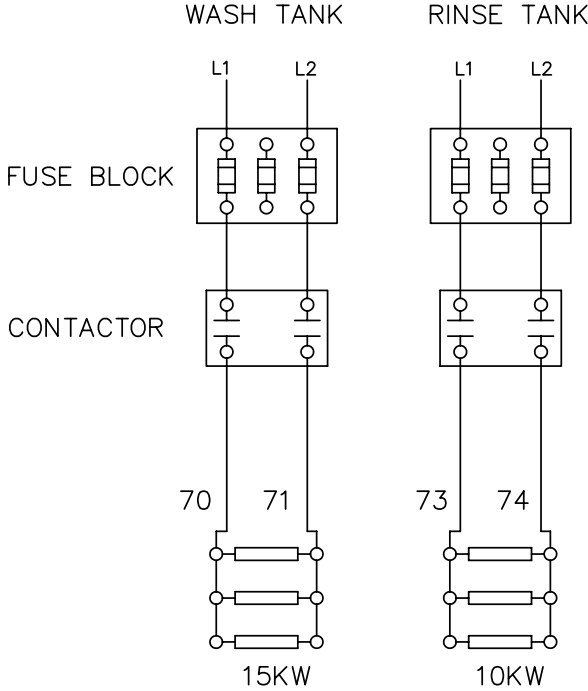
VOLTAGE 380V	WASH	RINSE
KW/CONTACTOR	15KW	10KW
CONTACTOR RATING	60A	60A
FUSE RATING	30A	20A
WIRE SIZE	#12	#12

VOLTAGE 415V	WASH	RINSE
KW/CONTACTOR	15KW	10KW
CONTACTOR RATING	60A	60A
FUSE RATING	30A	20A
WIRE SIZE	#12	#12

VOLTAGE 480V	WASH	RINSE
KW/CONTACTOR	15KW	10KW
CONTACTOR RATING	60A	60A
FUSE RATING	25A	20A
WIRE SIZE	#12	#12

VOLTAGE 575V	WASH	RINSE
KW/CONTACTOR	15KW	10KW
CONTACTOR RATING	60A	60A
FUSE RATING	20A	15A
WIRE SIZE	#12	#14

1 PHASE CONNECTION



VOLTAGE 200–220V	WASH	RINSE
KW/CONTACTOR	15KW	10KW
CONTACTOR RATING	75A	60A
FUSE RATING	90A	60A
WIRE SIZE	#4	#6

VOLTAGE 230–240V	WASH	RINSE
KW/CONTACTOR	15KW	10KW
CONTACTOR RATING	75A	60A
FUSE RATING	80A	50A
WIRE SIZE	#4	#8

PN: 113991

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz,  
AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH.  
ALL POWER SUPPLIED TO EACH CONNECTION POINT  
MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.

DR. BY	J. MCALLISTER	SCALE	
DATE	27 OCT 04	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY

REV.	DESCRIPTION	DATE	BY

**Champion**  
The Dishwashing Machine Specialists

WASH AND RINSE TANK HEAT FOR  
E SERIES RACK CONVEYOR MACHINES

B

701922

REV.

E SERIES RACK MACHINE INTERNAL BOOSTER HEATER WIRING

24 KW BOOSTER HEATER

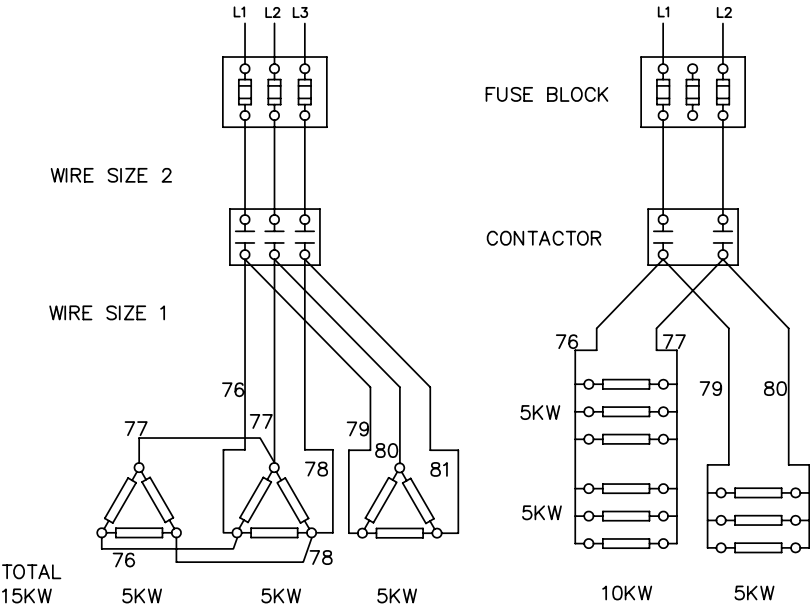
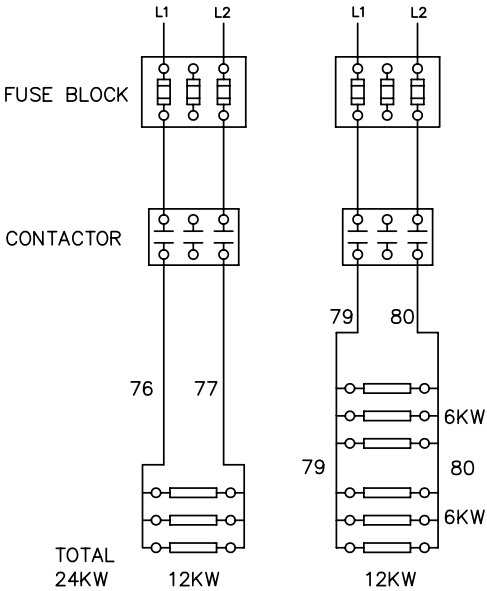
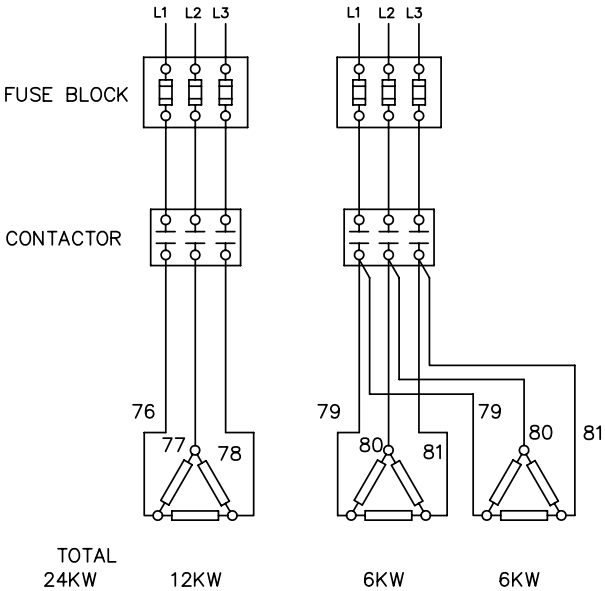
VOLTAGE 208V DELTA		
TOTAL KW	24KW	
KW/CONTACTOR	12KW	12KW
CONTACTOR #	1	2
CONTACTOR RATING	60A	60A
WIRE SIZE	8	8
FUSE RATING	45A	45A
VOLTAGE 240V DELTA		
TOTAL KW	24KW	
KW/CONTACTOR	12KW	12KW
CONTACTOR #	1	2
CONTACTOR RATING	60A	60A
WIRE SIZE	10	10
FUSE RATING	35A	35A
VOLTAGE 380V WYE (NOT SHOWN)		
TOTAL KW	24KW	
KW/CONTACTOR	12KW	12KW
CONTACTOR #	1	2
CONTACTOR RATING	60A	60A
WIRE SIZE	12	12
FUSE RATING	25A	25A
VOLTAGE 415V WYE (NOT SHOWN)		
TOTAL KW	24KW	
KW/CONTACTOR	12KW	12KW
CONTACTOR #	1	2
CONTACTOR RATING	60A	60A
WIRE SIZE	12	12
FUSE RATING	25A	25A
VOLTAGE 480V DELTA		
TOTAL KW	24KW	
KW/CONTACTOR	12KW	12KW
CONTACTOR #	1	2
CONTACTOR RATING	60A	60A
WIRE SIZE	12	12
FUSE RATING	20A	20A
VOLTAGE 575V DELTA		
TOTAL KW	24KW	
KW/CONTACTOR	12KW	12KW
CONTACTOR #	1	2
CONTACTOR RATING	60A	60A
WIRE SIZE	12	12
FUSE RATING	15A	15A

24 KW BOOSTER HEATER

VOLTAGE 208V SINGLE PHASE		
TOTAL KW	24KW	
KW/CONTACTOR	12KW	12KW
CONTACTOR #	1	2
CONTACTOR RATING	75A	75A
WIRE SIZE	6	6
FUSE RATING	70A	70A
VOLTAGE 240V SINGLE PHASE		
TOTAL KW	24KW	
KW/CONTACTOR	12KW	12KW
CONTACTOR #	1	2
CONTACTOR RATING	60A	60A
WIRE SIZE	6	6
FUSE RATING	60A	60A

15 KW BOOSTER HEATER

VOLTAGE 208V DELTA		
TOTAL KW	15KW	15KW
KW/CONTACTOR	15KW	15KW
CONTACTOR #	1	1
CONTACTOR RATING	60A	75A
WIRE SIZE 1	10	8
WIRE SIZE 2	8	4
FUSE RATING	50A	90A
VOLTAGE 240V DELTA		
TOTAL KW	15KW	15KW
KW/CONTACTOR	15KW	15KW
CONTACTOR #	1	1
CONTACTOR RATING	60A	75A
WIRE SIZE 1	10	8
WIRE SIZE 2	8	4
FUSE RATING	45A	80A
VOLTAGE 380V WYE (NOT SHOWN)		
TOTAL KW	15KW	
KW/CONTACTOR	15KW	
CONTACTOR #	1	
CONTACTOR RATING	60A	
WIRE SIZE 1	12	
WIRE SIZE 2	10	
FUSE RATING	30A	
VOLTAGE 415V WYE (NOT SHOWN)		
TOTAL KW	15KW	
KW/CONTACTOR	15KW	
CONTACTOR #	1	
CONTACTOR RATING	60A	
WIRE SIZE 1	12	
WIRE SIZE 2	10	
FUSE RATING	30A	
VOLTAGE 480V DELTA		
TOTAL KW	15KW	
KW/CONTACTOR	15KW	
CONTACTOR #	1	
CONTACTOR RATING	60A	
WIRE SIZE	12	
FUSE RATING	25A	
VOLTAGE 575V DELTA		
TOTAL KW	15KW	
KW/CONTACTOR	15KW	
CONTACTOR #	1	
CONTACTOR RATING	60A	
WIRE SIZE	12	
FUSE RATING	20A	



PN: 114038 REV B

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR.BY	J.MCALLISTER	SCALE	NONE
DATE	5NOV04	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
A	CHANGE HEATER CONFIGURATION	23MAR06	JAM

REV.	DESCRIPTION	DATE	BY

**Champion**

The Dishwashing Machine Specialists

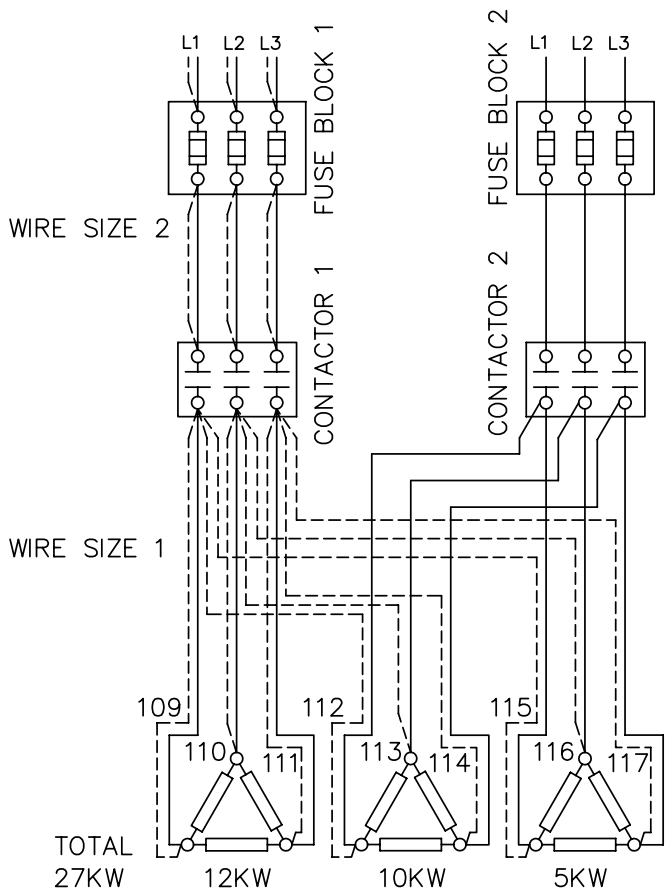
INTERNAL BOOSTER HEAT  
E SERIES RACK CONVEYOR MACHINES

B

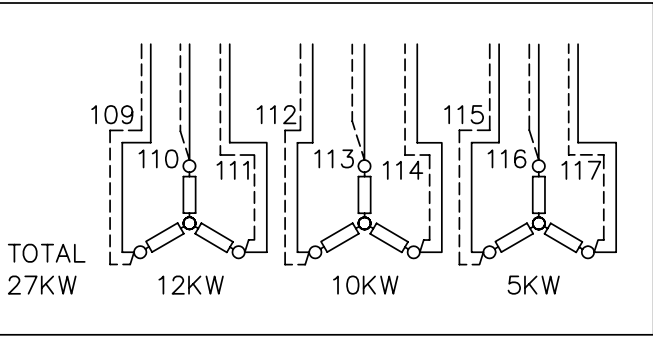
701914

REV. A

3 PHASE CONNECTION



Y CONNECTION 380/415V ONLY



CANISTER 1 KW/CANISTER 27KW			
VOLTAGE 200-220V			
KW/CONTACTOR	12KW	15KW	
CONTACTOR #	1	2	
CONTACTOR RATING	60A	60A	
FUSE BLOCK #	1	2	
FUSE RATING	45A	60A	
WIRE SIZE 1 AND 2	#8	#6	

CANISTER 1 KW/CANISTER 27KW			
VOLTAGE 230-240V			
KW/CONTACTOR	12KW	15KW	
CONTACTOR #	1	2	
CONTACTOR RATING	60A	60A	
FUSE BLOCK #	1	2	
FUSE RATING	40A	50A	
WIRE SIZE 1 AND 2	#8	#8	

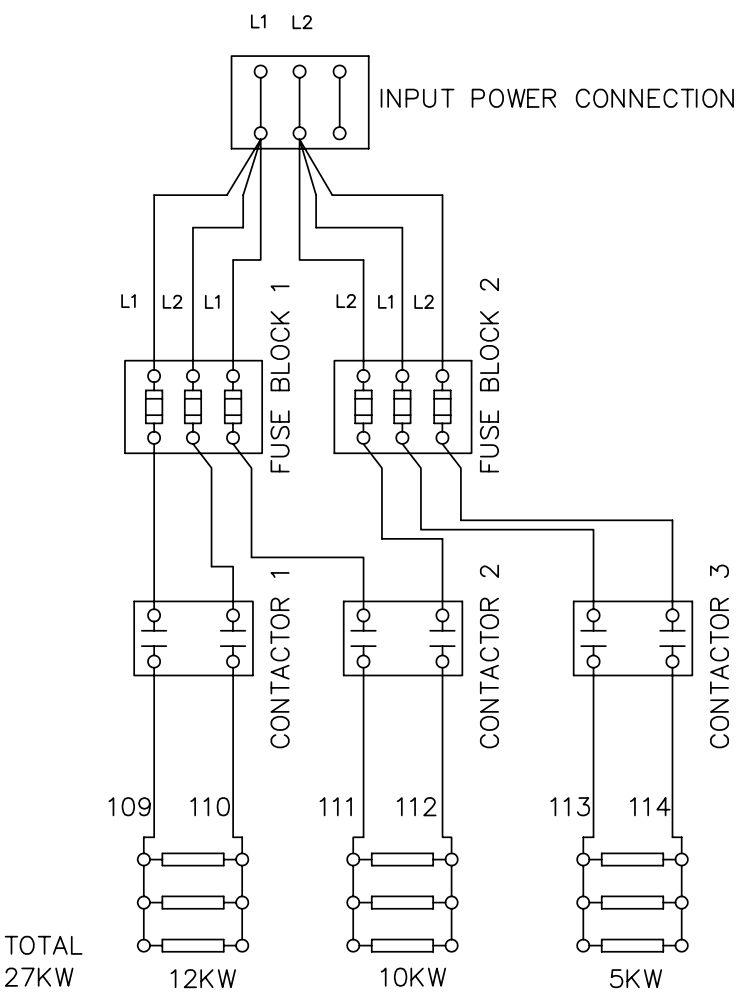
CANISTER 1 KW/CANISTER 27KW			
VOLTAGE 380V			
KW/CONTACTOR	27KW		
CONTACTOR #	1		
CONTACTOR RATING	60A		
FUSE BLOCK #	1		
FUSE RATING	50A		
WIRE SIZE 1	#12		
WIRE SIZE 2	#8		

CANISTER 1 KW/CANISTER 27KW			
VOLTAGE 415V			
KW/CONTACTOR	27KW		
CONTACTOR #	1		
CONTACTOR RATING	60A		
FUSE BLOCK #	1		
FUSE RATING	50A		
WIRE SIZE 1	#12		
WIRE SIZE 2	#8		

CANISTER 1 KW/CANISTER 27KW			
VOLTAGE 480V			
KW/CONTACTOR	27KW		
CONTACTOR #	1		
CONTACTOR RATING	60A		
FUSE BLOCK #	1		
FUSE RATING	40A		
WIRE SIZE 1	#12		
WIRE SIZE 2	#10		

CANISTER 1 KW/CANISTER 27KW			
VOLTAGE 575V			
KW/CONTACTOR	27KW		
CONTACTOR #	1		
CONTACTOR RATING	60A		
FUSE BLOCK #	1		
FUSE RATING	35A		
WIRE SIZE 1	#12		
WIRE SIZE 2	#10		

1 PHASE CONNECTION



CANISTER 1 KW/CANISTER 27KW			
VOLTAGE 200-220V			
KW/CONTACTOR	12KW	10KW	5KW
CONTACTOR #	1	2	3
CONTACTOR RATING	75A	60A	60A
FUSE BLOCK #	1	2	3
FUSE RATING	70A	60A	30A
WIRE SIZE	#6	#6	#10

CANISTER 1 KW/CANISTER 27KW			
VOLTAGE 230-240V			
KW/CONTACTOR	12KW	10KW	5KW
CONTACTOR #	1	2	3
CONTACTOR RATING	60A	60A	60A
FUSE BLOCK #	1	2	3
FUSE RATING	60A	60A	30A
WIRE SIZE	#6	#6	#10

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/HZ AS SPECIFIED PER ORDER TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR. BY	J.MCALLISTER	SCALE	NONE
DATE	03MAY04	SHEET	1 OF 1

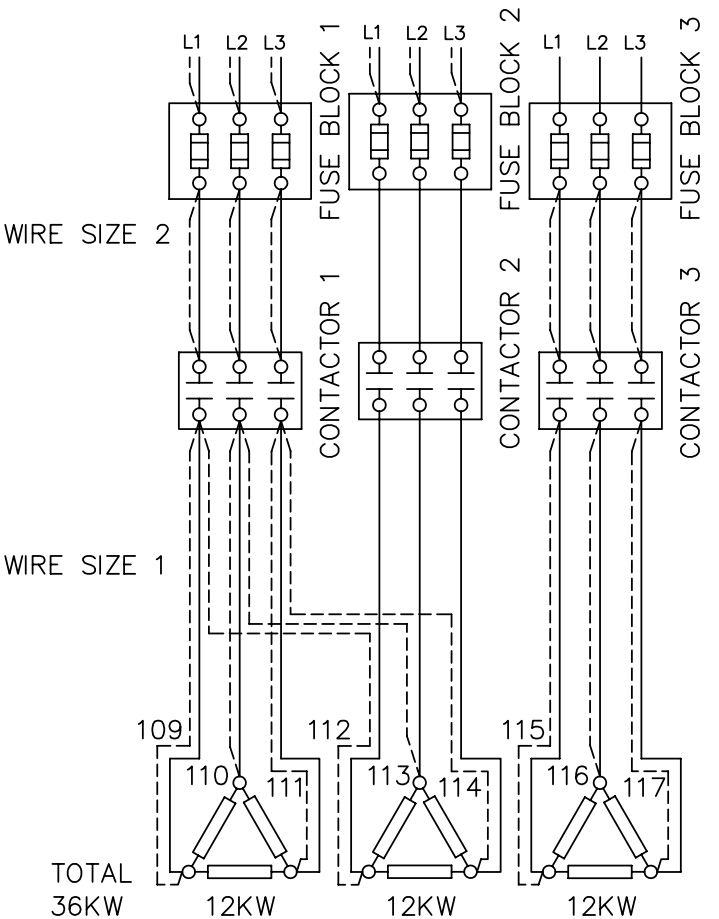
REV.	DESCRIPTION	DATE	BY

REV.	DESCRIPTION	DATE	BY

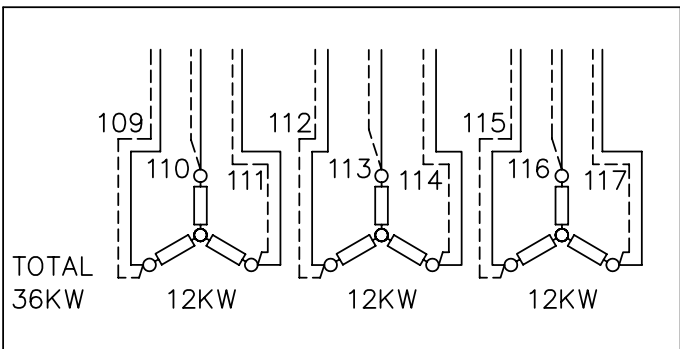
<b>Champion</b> The Dishwashing Machine Specialists		CH-27E, 27KW BOOSTER FOR RACK CONVEYOR MACHINES	
		B 701888	REV.

3 PHASE CONNECTION

1 PHASE CONNECTION



Y CONNECTION 380/415V ONLY



CANISTER 1 KW/CANISTER 36KW				
VOLTAGE 200-220V				
KW/CONTACTOR	12KW	12KW	12KW	
CONTACTOR #	1	2	3	
CONTACTOR RATING	60A	60A	60A	
FUSE BLOCK #	1	2	3	
FUSE RATING	45A	45A	45A	
WIRE SIZE 1 AND 2	#8	#8	#8	

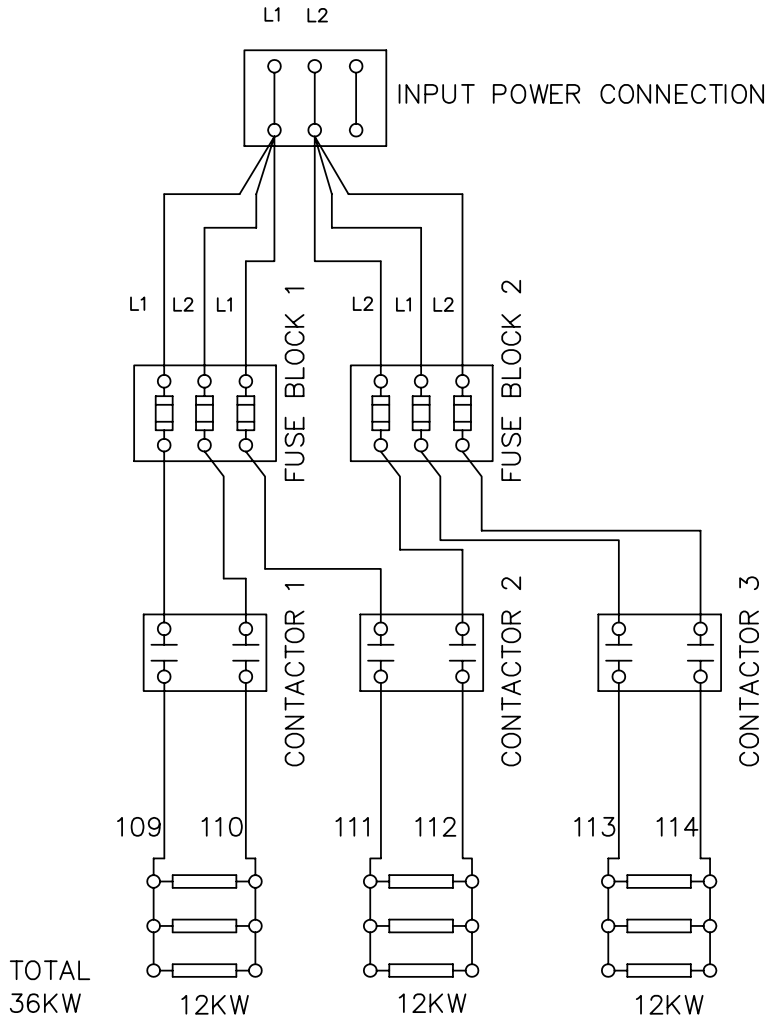
CANISTER 1 KW/CANISTER 36KW				
VOLTAGE 230-240V				
KW/CONTACTOR	12KW	12KW	12KW	
CONTACTOR #	1	2	3	
CONTACTOR RATING	60A	60A	60A	
FUSE BLOCK #	1	2	3	
FUSE RATING	40A	40A	40A	
WIRE SIZE 1 AND 2	#8	#8	#8	

CANISTER 1 KW/CANISTER 36KW				
VOLTAGE 380V				
KW/CONTACTOR	24KW		12KW	
CONTACTOR #	1		3	
CONTACTOR RATING	60A		60A	
FUSE BLOCK #	1		3	
FUSE RATING	45A		25A	
WIRE SIZE 1	#12		#12	
WIRE SIZE 2	#8		#12	

CANISTER 1 KW/CANISTER 36KW				
VOLTAGE 415V				
KW/CONTACTOR	24KW		12KW	
CONTACTOR #	1		3	
CONTACTOR RATING	60A		60A	
FUSE BLOCK #	1		3	
FUSE RATING	45A		25A	
WIRE SIZE 1	#12		#12	
WIRE SIZE 2	#8		#12	

CANISTER 1 KW/CANISTER 36KW				
VOLTAGE 480V				
KW/CONTACTOR	24KW		12KW	
CONTACTOR #	1		3	
CONTACTOR RATING	60A		60A	
FUSE BLOCK #	1		2	
FUSE RATING	40A		20A	
WIRE SIZE 1	#12		#12	
WIRE SIZE 2	#10		#12	

CANISTER 1 KW/CANISTER 36KW				
VOLTAGE 575V				
KW/CONTACTOR	24KW		12KW	
CONTACTOR #	1		3	
CONTACTOR RATING	60A		60A	
FUSE BLOCK #	1		3	
FUSE RATING	30A		15A	
WIRE SIZE 1	#12		#12	
WIRE SIZE 2	#10		#12	



CANISTER 1 KW/CANISTER 36KW				
VOLTAGE 200-220V				
KW/CONTACTOR	12KW	12KW	12KW	
CONTACTOR #	1	2	3	
CONTACTOR RATING	75A	75A	75A	
FUSE BLOCK #	1	2	3	
FUSE RATING	70A	70A	70A	
WIRE SIZE	#4	#4	#4	

CANISTER 1 KW/CANISTER 36KW				
VOLTAGE 230-240V				
KW/CONTACTOR	12KW	12KW	12KW	
CONTACTOR #	1	2	3	
CONTACTOR RATING	75A	75A	75A	
FUSE BLOCK #	1	2	3	
FUSE RATING	70A	70A	70A	
WIRE SIZE	#6	#6	#6	

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/HZ, AS SPECIFIED PER ORDER TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.

DR. BY	J. MCALLISTER	SCALE	
DATE	05APR04	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY

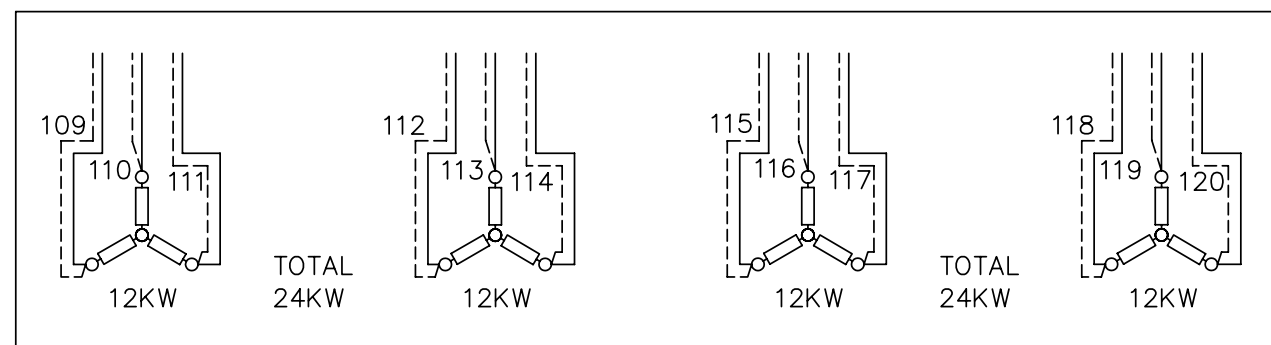
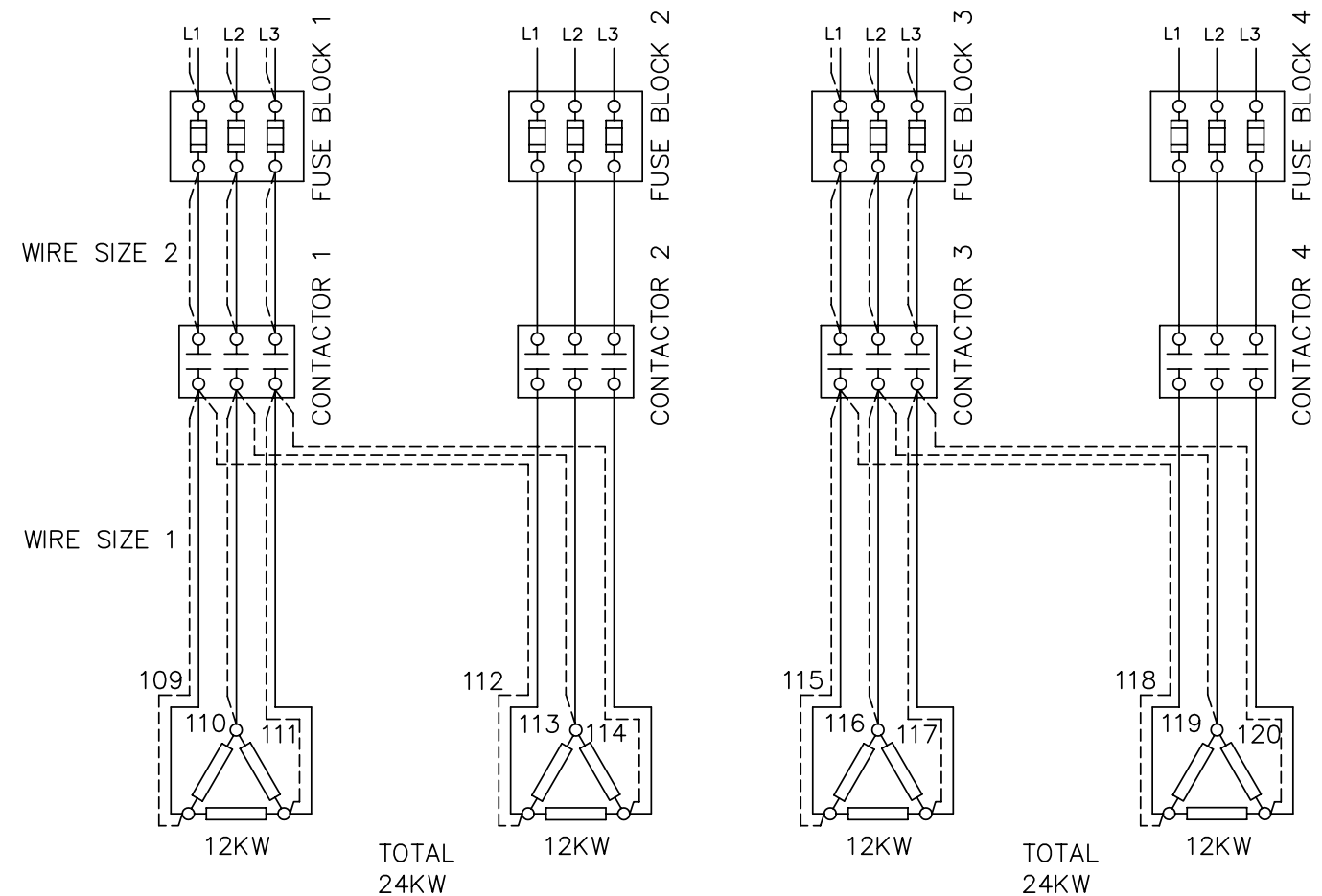
REV.	DESCRIPTION	DATE	BY

**Champion**  
The Dishwashing Machine Specialists

CH-36E, 36KW BOOSTER  
FOR RACK CONVEYOR MACHINES

B	701861	REV.
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Y CONNECTION 380/415V ONLY

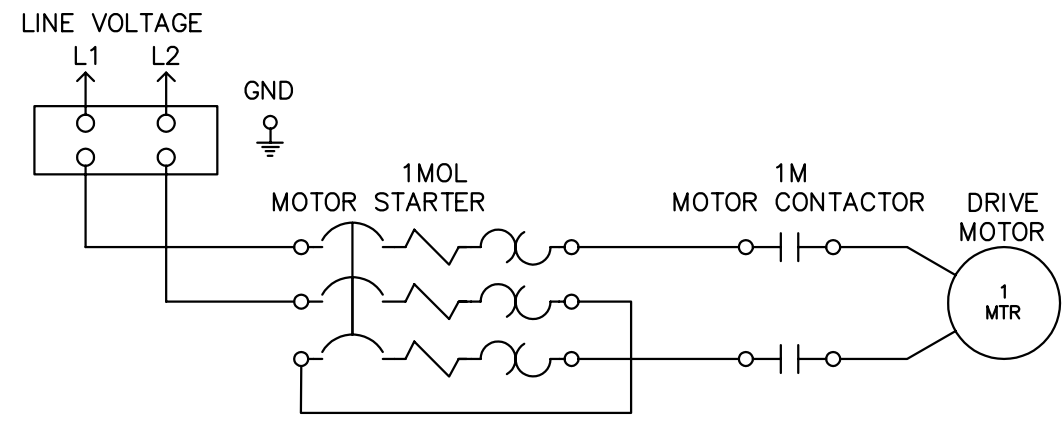
CANISTER 1 KW/CANISTER 24KW VOLTAGE 200-220V				CANISTER 2 KW/CANISTER 24KW VOLTAGE 200-220V			
KW/CONTACTOR		12KW	12KW	KW/CONTACTOR		12KW	12KW
CONTACTOR #		1	2	CONTACTOR #		3	4
CONTACTOR RATING		60A	60A	CONTACTOR RATING		60A	60A
FUSE BLOCK #		1	2	FUSE BLOCK #		3	4
FUSE RATING		45A	45A	FUSE RATING		45A	45A
WIRE SIZE 1 AND 2		#8	#8	WIRE SIZE 1 AND 2		#8	#8
CANISTER 1 KW/CANISTER 24KW VOLTAGE 230-240V				CANISTER 2 KW/CANISTER 24KW VOLTAGE 230-240V			
KW/CONTACTOR		12KW	12KW	KW/CONTACTOR		12KW	12KW
CONTACTOR #		1	2	CONTACTOR #		3	4
CONTACTOR RATING		60A	60A	CONTACTOR RATING		60A	60A
FUSE BLOCK #		1	2	FUSE BLOCK #		3	4
FUSE RATING		40A	40A	FUSE RATING		40A	40A
WIRE SIZE 1 AND 2		#8	#8	WIRE SIZE 1 AND 2		#8	#8
CANISTER 1 KW/CANISTER 24KW VOLTAGE 380V				CANISTER 2 KW/CANISTER 24KW VOLTAGE 380V			
KW/CONTACTOR		24KW		KW/CONTACTOR		24KW	
CONTACTOR #		1		CONTACTOR #		3	
CONTACTOR RATING		60A		CONTACTOR RATING		60A	
FUSE BLOCK #		1		FUSE BLOCK #		3	
FUSE RATING		45A		FUSE RATING		45A	
WIRE SIZE 1		#12		WIRE SIZE 1		#12	
WIRE SIZE 2		#8		WIRE SIZE 2		#8	
CANISTER 1 KW/CANISTER 24KW VOLTAGE 415V				CANISTER 2 KW/CANISTER 24KW VOLTAGE 415V			
KW/CONTACTOR		24KW		KW/CONTACTOR		24KW	
CONTACTOR #		1		CONTACTOR #		3	
CONTACTOR RATING		60A		CONTACTOR RATING		60A	
FUSE BLOCK #		1		FUSE BLOCK #		3	
FUSE RATING		45A		FUSE RATING		45A	
WIRE SIZE 1		#12		WIRE SIZE 1		#12	
WIRE SIZE 2		#8		WIRE SIZE 2		#8	
CANISTER 1 KW/CANISTER 24KW VOLTAGE 480V				CANISTER 2 KW/CANISTER 24KW VOLTAGE 480V			
KW/CONTACTOR		24KW		KW/CONTACTOR		24KW	
CONTACTOR #		1		CONTACTOR #		3	
CONTACTOR RATING		60A		CONTACTOR RATING		60A	
FUSE BLOCK #		1		FUSE BLOCK #		3	
FUSE RATING		40A		FUSE RATING		40A	
WIRE SIZE 1		#12		WIRE SIZE 1		#12	
WIRE SIZE 2		#10		WIRE SIZE 2		#10	
CANISTER 1 KW/CANISTER 24KW VOLTAGE 575V				CANISTER 2 KW/CANISTER 24KW VOLTAGE 575V			
KW/CONTACTOR		24KW		KW/CONTACTOR		24KW	
CONTACTOR #		1		CONTACTOR #		3	
CONTACTOR RATING		60A		CONTACTOR RATING		60A	
FUSE BLOCK #		1		FUSE BLOCK #		3	
FUSE RATING		30A		FUSE RATING		30A	
WIRE SIZE 1		#12		WIRE SIZE 1		#12	
WIRE SIZE 2		#10		WIRE SIZE 2		#10	

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.			
DR. BY	J. MCALLISTER	SCALE	
DATE	05APR04	SHEET	1 OF 1

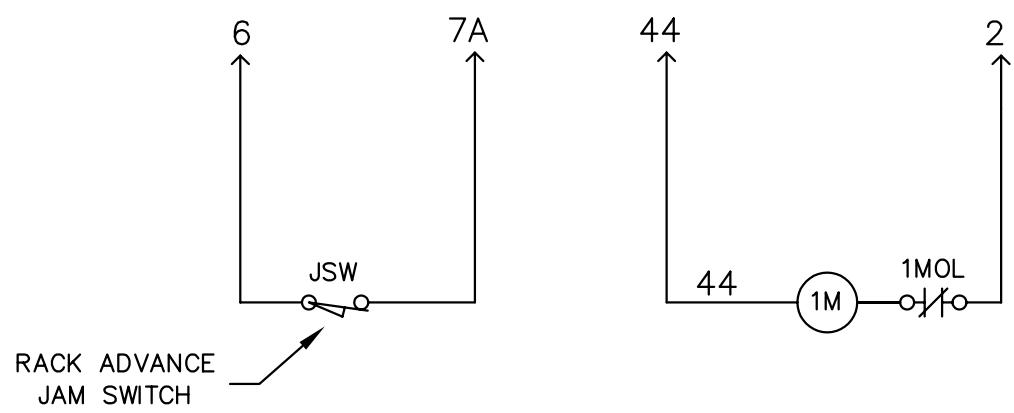
REV.	DESCRIPTION	DATE	BY

REV.	DESCRIPTION	DATE	BY

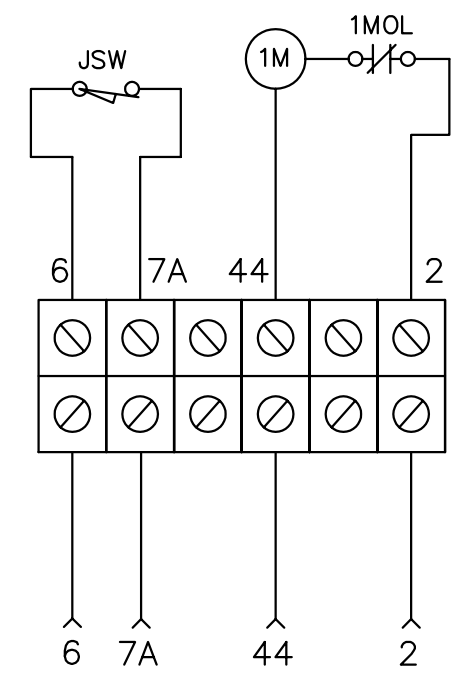
<b>Champion</b> The Dishwashing Machine Specialists		CH-48E, 48KW BOOSTER FOR RACK CONVEYOR MACHINES	
		B 701862	REV.



TO JUNCTION BOX UNDER DISH MACHINE



SCHEMATIC



WIRING DIAGRAM

CUSTOMER TO SUPPLY RATED VOLTAGE/PHASE/Hz, AS SPECIFIED PER ORDER, TO DISCONNECT SWITCH. ALL POWER SUPPLIED TO EACH CONNECTION POINT MUST COMPLY WITH ALL LOCAL ELECTRIC CODES.

DR. BY	J. MCALLISTER	SCALE	
DATE	3MAY05	SHEET	1 OF 1

REV.	DESCRIPTION	DATE	BY
A	CHANGED CONTROL WIRING REMOVED TLS CONNECTION	25JUL06	JAM

**Champion**  
The Dishwashing Machine Specialists

90/180 DEGREE  
RACK ADVANCE E SERIES

A701927A

REV. A